HAMBURGER STERNWARTE
WARNER AND SWASEY OBSERVATORY

LUMINOUS STARS
IN THE NORTHERN MILKY WAY

II

no prior Record of # I

Hamburger Sternwarte
Warner and Swasey Observatory

LUMINOUS STARS IN THE NORTHERN MILKY WAY

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I. INTRODUCTION

This publication is the second of a series of catalogues presenting the results of a joint survey, by the Hamburg and Warner and Swasey Obersvatories, of early-type stars of high luminosity in the northern Milky Way. The historical origins and intended scope of the survey are discussed in the first number of the series (1), hereafter referred to as "Paper I." The discussion in Paper I of the various practical details of the production of the catalogue applies in nearly all respects to the present publication and will not be repeated here except insofar as desirable for convenience in using the material. The remainder of this preface will, therefore, primarily have the purpose of detailing the few differences between this publication and the preceding one and of including additional remarks.

The boundaries, in right ascension and declination or in galactic longitude and latitude, of the area surveyed for the present catalogue are given by the solid-line boundaries on the charts following the catalogue. The plates were taken with the Hamburg Schmidt telescope. The rest of the task was the sole responsibility of the present authors.

II. THE PROGRAM

The details of the observational procedure are essentially as given in Paper I. It should be mentioned, however, that no Hα-plates were taken for the fields between declinations $+20^{\circ}$ and $+10^{\circ}$, nor in many cases at the highest latitudes, and this fact should be borne in mind in connection both with the catalogue and the charts, both of which contain information about the presence of Hα in emission as will be discussed below.

The limiting magnitude of this survey is approximately that of Paper I, viz., the 12th to 13th photographic magnitude, depending on the spectral types of the stars in question. A discussion of the relation between spectral type and limiting magnitude is given in Paper I.

III. CLASSIFICATION

See Paper I for fuller discussion. We should take this opportunity to mention that some of the MK types of the catalogue are given in a form implying extreme precision in subdivision of spectral classes (e.g., A6 Ib-II). Such types are the result mainly of averaging differing classifications of two observers or of more than one plate, and they have been retained solely for the statistical purpose of lowering the over-all mean errors of the published types.

The enlarged experience with Hα plates and other material obtained since Paper I has left some uncertainty as to the exact physical significance of the spectral feature designated as "ce," which is an apparent continuous emission near the Balmer limit (cf. Paper I, p. 7). The nature of this uncertainty is best characterized by saying that the occurrence of the "ce" notation with an OB type serves as a warning that the star may be less luminous than indicated by the hydrogen line strength (its classification as OB^+, OB, or OB^-), but not as a guarantee that it is so. The same remark applies to OE stars which in the present publication are stated to show Hα in emission and accounts for the retention of these stars in the present catalogue.

The spectral types given in the "Remarks" column have been taken from the literature, mostly from the Morgan, Code and Whitford catalogue (2) but also from many other sources of slit spectrograph classifications. These types are given only for purposes of comparison with our classifications, and for this reason the search for published classifications has not been exhaustive, although it should be nearly complete; for the same reason, references to the sources of these types are omitted even though in a few cases differing classifications have been published for the same star. In all cases our spectra were classified without knowledge of published types.

IV. THE MAGNITUDES

As in Paper I, photoelectric magnitude sequences, as available, were used to calibrate the spectral image densities, and these calibrations were transferred to other fields through plate overlaps. For this purpose, data given by Morgan, Code, and Whitford (2) and Hiltner (3) were the principal sources. Photographic sources such as the AGK_2 were also used to strengthen the transfer from plate to plate.

V. THE POSITIONS

The positions given here should almost always be reliable to $0^s.1$, but by no means always to the precision of $0^s.1$ and $1''$ which is given in the catalogue. The precession has also been calculated with formulae guaranteeing $0^s.1$ accuracy for time intervals up to 100 years. The positions came from measurements of the spectral plates themselves, in consequence of which the declination errors, which depend critically upon the accurate locations of spectral lines, may sometimes exceed $0^s.1$ for the faint or highly luminous OB stars whose lines were difficult to see at the measuring engine. The right ascension error,

however, is nearly always very much smaller than 0.1. The positions given for stars occurring in the AGK_2 are the AGK_2 positions and accordingly are exempt from the foregoing discussion.

From the 1950 values, 1855 coordinates were computed, and, as in Paper I, BD numbers were obtained by comparison of computed coordinates with the BD catalogue. This procedure can be expected to lead to a few errors in identification. The more doubtful cases were clarified by direct examination of the plates, and a check against false identification was in some cases available from the complete comparison between our coordinates and the Aitken double star catalogue which was performed. Nevertheless, as an aid to resolving any ambiguities which may arise in the use of the catalogue as a finding list, we quote the maximum disagreement between our data and the BD which was formally tolerated in making identifications: For stars brighter than m_{pg} 10.1, $2^s.3$ in R.A. and 0.8 in declination, and $-0^m.5 \leq m_{pg} - m_{BD} \leq +1^m.9$. For stars fainter than 10.0 pg the position tolerances were $1^s.5$ in R.A. and 0.7 in declination. Stars fainter than m_{pg} 11.4 were assumed to be non-BD stars; and the few BD identifications exceeding the above limits are based on plate examinations.

The precession for 50 years was computed with quadratic time terms, in the sense 1950 to 1900. The sign of the catalogue precession is, however, that for going forward in time. The tabulated precessions thus permit coordinate transformations forward with sufficient accuracy for most purposes, and (with signs reversed) yield 1900 positions as accurate as the measurements themselves.

VI. THE CATALOGUE

The arrangement of the catalogue is that of Paper I. For convenience in use of the catalogue, we repeat the description of the columns in addition to a few additions and changes.

The remarks to the catalogue contain a number of data of a type not present in Paper I. The only one which warrants any discussion is the identification of components of double and multiple stars. For the stars of the Aitken catalogue, the identifications are based on comparisons with the Aitken catalogue and, in a great many cases, on examinations of the plates. Most of the blends, indicated by AB, etc., were not apparent as blends on the original plates, resembling only a single, non-composite spectrum. These were nevertheless designated as blends for lack of accurate knowledge of the photographic magnitude difference

between the components. The pairs included by Burnham but omitted by Aitken were merely quoted from the AGK_2. The identification of Burnham systems is thus somewhat incomplete; but, since our principal purpose in identifying double stars is to avoid ambiguities, and since the Aitken-omitted Burnham stars are generally wide pairs, the incompleteness of the Burnham data is not important in the present context.

The columns contain the following data:

Column 1. Consecutive number for the 1950 declination zone.

Column 2. BD-number.

Column 3. Estimated spectral type. Here "ce" = continuous emission near the Balmer limit; "le" = line emission, usually one or more members of the Balmer series, noted on the blue plates; "h"= Hα observed in emission; "p" = peculiar; and parentheses enclose uncertain information.

Column 4. Photographic magnitude. Colons indicate especially uncertain values.

Column 5. Right ascension for the equinox - 1950.0.

Column 6. Declination for the equinox - 1950.0. Colons indicate uncertain values.

Column 7. 50-year precession in R.A., in the sense 1950 to 1900 as to quadratic terms but with sign for precession forward.

Column 8. 50-year precession in decl., computed as for R.A.

Column 9. Remarks. These include published slit spectral classifications; designation in the Yale Catalogue of Bright Stars, the Aitken (ADS) or Burnham (BDS) double star catalogues, and the 1958 edition of the Russian variable star catalogue; and some other material. "R" indicates a remark in the section of supplementary remarks following the main catalogue.

VII. THE DISTRIBUTION OF THE STARS

As in Paper I, the distribution of the stars of the catalogue are shown in charts following the catalogue. These show separately the OB^+, OB, OB^-, OBce, cB-A and cF-G groups. The OBce plot now includes Hα-emission OB stars, le stars, and Wolf-Rayets, the last being indicated by horizontal lines flanking the dots. The supergiant plots distinguish luminosity class II and Ib-II from higher luminosities, the latter being shown with horizontal lines for the cBA group and the former thus for the cFG group. Equatorial coordinates for 1950 are indicated by short crosses at intervals of 20^m in R.A. and 5^o in decln. Galactic coordinates, based on the new galactic coordinate system recommended by the I. A. U. (4), are shown by longer crosses at intervals of 2^o in l and b. On two charts, the crowding of the

stars in Cygnus, at the well-known collection of early-type objects near P Cygni, made the use of the regular magnitude symbols impractical. Here all stars are indicated by small dots; the region in which this was done is shown by a rectangle.

VIII. ANALYSIS OF THE DATA

The purpose of publishing this material at this time is to present at the earliest moment a finding list for observers who may wish to utilize such a list. Even in their present raw form, however, these data are amenable to certain types of analysis and interpretation. This work is still in progress, and the results will be published separately. The types of discussion now under way, most of which will, to be sure, be incomplete until reddening data become available, include: tests for reality of known OB associations by looking for concentrations of fainter stars at larger distance moduli in the same directions, or for associated concentrations of early giants (omitted from this catalogue) and supergiants; a search for possible new associations; possible new exciting stars for known emission regions; dispersion of the various OB classes about the old and new galactic planes; crude estimates of mean interstellar absorption; and possible galactic cluster membership of the new F supergiants.

Similarly, a large number of byproducts of this survey are still under investigation. These include early giants, new Hα- and blue-emission stars, planetary nebulae, composite spectra, visual binaries, carbon and S stars, and so on. A discussion of new data for known and new galactic clusters, based on this material, has already been published by Roslund (5).

The reduction from plate measures to 1950 coordinates was carried out on an IBM 650 at Cincinnati by Professor Paul Herget, whose valuable aid and advice are greatly appreciated. The reduction to 1855 coordinates and 50-year precession was computed on the Burroughs 220 of the Case Institute of Technology; we wish to thank Mr. Frederick Way, III, associate director of the Computing Center, for the aid furnished us by him and his staff.

Mr. Arthur Upgren and Mr. Curt Roslund measured many of the plates and were helpful in nearly all phases of this project. The Hamburg observers, who took varying proportions of the plates, are J. Hardorp, I. Ozsvath, K. Rohlfs, J. Stock, and A. Slettebak. Mrs. Betty Stephenson, Mr. Rolf Mehlhorn and Mr. John Finnerty assisted with various phases of plate measurement, computing, editing, and chart construction; our thanks are due to all of them.

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REFERENCES

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(2) W. W. Morgan, A. D. Code, and A. E. Whitford, Ap. J. Suppl. 2, no. 14, 1955.

(3) W. A. Hiltner, Ap. J. Suppl. 2, no. 24, 1956.

(4) The Observatory, 79, 118, 1959.

(5) C. Roslund, Pub. A. S. P., 72, 205, 1960.

No.	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
1	---	OB⁻r	11.3	$19^h56^m22^s2$	$9^o52'56''$	2^m23^s5	8' 2"	
1	---	OB	10.6	18 41 28.3	10 56 21	2 21.0	2 55	
2	---	OB	11.0	42 22.7	58 46	2 20.9	2 58	
3	9^o 3894	OB(ce)	10.2	48 43.4	3 30	2 22.1	3 26	
4	---	OB⁻	10.6	50 11.9	5 52	2 22.1	3 32	
5	10 3800	(F9 Ia)	9.2	19 6 54.1	28 16	2 21.9	4 43	FM Aql
6	10 3849	B9 II	8.4	19 14 24.9	53 22	2 21.5	5 14	
7	10 3872	B8 Ibr	10.9	19 17.6	39 55	2 21.8	5 34	
8	---	OB⁻	11.7	22 56.2	16 54	2 22.3	5 49	
9	10 4058	G2 Ia	7.6	46 7.9	34 7	2 22.5	7 22	F8 Ib-II
10	---	F8 I	12.2	50 52.0	10 42	2 23.1	7 41	
1	11 3687	B8 II	9.5	18 57 22.9	11 20 49	2 20.7	4 3	
2	10 3774	OB⁺(ce,le)r	9.7	19 1 46.8	1 53	2 21.1	4 21	B1.5: IV ne; R
3	11 3738	OB⁻	9.7	4 37.5	21 48	2 20.8	4 33	
4	10 3799	OBr	10.5	6 40.0	1 49	2 21.2	4 42	
5	11 3850	(F2 II)	9.9	26 3.8	57 44	2 20.5	6 2	ADS 12489 A; R
6	---	F6 Ib	11.2	28 12.6	56 18	2 20.6	6 11	
7	11 3908	F3 Ib-II	9.4	34 3.7	55 20	2 20.7	6 35	
8	---	OB⁻	10.5	35 52.4	33 4	2 21.2	6 42	
9	11 3946	OB⁺	9.1	38 52.0	56 42	2 20.8	6 54	
10	---	F8 I	12.2	20 0 50.9	42 56	2 21.7	8 19	
1	12 3790	A0 II	8.0	19 2 3.8	12 55 16	2 18.9	4 22	
2	11 3725	B8 II	9.7	3 5.4	5 54	2 19.9	4 27	
3	---	OB⁺r	11.6	3 14.5	46 22	2 19.1	4 27	
4	---	OB	13.1	3 53.7	21 26	2 19.6	4 30	
5	---	OB⁻	12.5	9 14.2	26 43	2 19.6	4 53	
6	---	OB⁻	12.2	13 37.0	52 4	2 19.2	5 11	
7	12 3927	OBr	10.4	27 6.4	28 11	2 20.0	6 6	
8	---	F3 II	10.4	30 43.5	35 26	2 19.9	6 21	
9	---	OB⁺	11.0	34 26.8	58 51	2 19.6	6 36	
10	---	F6 Ib	11.8	55 9.2	52 7	2 20.3	7 57	
1	13 3754	OBr	10.6	18 45 25.1	13 8 28	2 18.4	3 12	
2	---	OBr	11.8	19 2 18.2	56 36	2 17.7	4 24	R
3	---	OB	12.5	6 0.0	44 47	2 18.0	4 39	
4	---	OBle	12.5	20 51.7	45 24	2 18.3	5 41	
5	---	(OBle)	12.5	21 9.4	29 2	2 18.7	5 42	
6	---	B9 II	11.3	25 17.1	24 18	2 18.8	5 59	
7	---	OB	11.1	34 44.9	25 38	2 19.1	6 37	
8	---	F5 Ib	10.4	34 50.7	45 49	2 18.7	6 38	
9	---	OB⁺(le)	11.4	37 20.9	45 34	2 18.8	6 48	
10	13 4091	OB(le)	10.5	37 22.7	55 57	2 18.6	6 48	R
11	---	OB⁻	11.3	41 40.0	29 21	2 19.2	7 5	
12	---	OB⁻	12.0	48 9.3	27 1	2 19.5	7 30	
13	---	OB	12.4	48 41.6	39 38	2 19.2	7 32	
1	---	OB	10.0	18 44 51.1	14 43 17	2 16.4	3 9	
2	---	OB	10.3	45 55.9	5 51	2 17 2	3 14	
3	---	OB⁻	10.6	50 46.2	43 37	2 16.5	3 35	
4	14 3720	OB(ce)	9.3	55 7.2	20 12	2 17.1	3 53	
5	14 3763	OB⁺	10.6	19 1 20.7	51 48	2 16 6	4 20	
6	---	OB⁻	11.8	5 10 0	24 27	2 17.2	4 36	
7	---	(OB)	12 0	5 44 5	36 47	2 17 0	4 38	
8	---	OB⁺r	10 7	14 30 7	28 24	2 17.3	5 15	
9	14 3863	OB⁺	10.7	16 34 6	14 8	2 17.7	5 23	
10	14 3881	F8 Iar	8 5	18 23.2	19 28	2 17.6	5 31	BDS 9223 A

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
11	14° 3887	OB+le,r	11.3	19h19m16s9	14°47' 9"	2m17s1	5'34"	
12	14 3952	B9 II	10.4	29 5s.4	19 14	2 17.9	6 18	
13	---	OB	11.9	37 1.2	48 56	2 17.6	6 46	
14	---	OB+	11.4	40 50.8	43 3	2 17.8	7 2	
15	---	F0 Ib	12.4	5x 20.6	50 11	2 18.0	7 43	
16	14 4158	G0 Ia	7.8	20 1 31.1	14 50 28	2 18.4	8 22	ADS 13310 A
1	---	OB+ce	11.5	18 38 48.3	15 20 58	2 15.6	2 43	
2	---	F3 I	10.5	48 12.3	52 46	2 15.1	3 24	AP Her
3	---	OB	10.3	55 30.4	24 56	2 15.8	3 55	
4	---	B8 II	11.3	19 8 51.0	5 33	2 16.5	4 51	
5	---	B8 II	11.7	12 21.0	31 37	2 16.0	5 6	
6	---	OB-	12.7	15 10.5	8 5	2 16.6	5 17	
7	---	OB-	10.8	17 1.0	33 36	2 16.1	5 25	
8	---	B9 Iab	11.7	17 19.4	32 0	2 16.2	5 26	
9	---	OB+r	12.0	18 12.9	32 44	2 16.2	5 30	
10	15 3782	A3 Ib	9.6	19 42.8	46 11	2 15.9	5 36	
11	15 3787	B7 II	9.8	20 44.1	57 38	2 15.7	5 40	
12	14 3898	OB+(ce)r	10.2	21 7.1	7 5	2 16.7	5 42	B0 III
13	14 3880	A0 II + A0 II	9.8	35 2.4	27 8	2 16.8	6 38	
14	---	B8 II	10.1	42 13.0	8 7	2 17.4	7 7	
15	---	OB	9.9:	46 11.7	29 54	2 17.1	7 23	V688 Aql
16	---	OB+le,rr	12.4	55 21.5	7 3	2 17.9	7 58	
17	---	F6 Iab	10.0	58 52.4	39 52	2 17.4	8 12	KL Aql
18	14 4146	G0 I	9.3	59 56.3	12 6	2 18.0	8 16	
1	---	F (I)p	12.1:	18 39 26.9	16 3 41	2 14.7	2 46	
2	---	F8 Ib	10.2:	47 25.6	25 1	2 14.4	3 20	
3	16 3721	A0 (II)	10.0	19 2 39.1	29 23	2 14.6	4 25	
4	---	WN(5)	11.7	9 16.4	46 35	2 14.4	4 53	K
5	16 3780	F4 Iab	9.9	10 48.2	25 1	2 14.9	4 59	
6	16 3826	A2 II	9.9	19 50.4	26 51	2 15.1	5 37	
7	---	OB+	12.0	24 20.0	49 15	2 14.8	5 55	
8	---	OB+ce,r	11.1	28 30.4	49 8	2 15.0	6 12	
9	---	OBle	11.1	30 31.0	55 18	2 14.9	6 20	R
10	---	OB-	11.8	30 53.6	44 49	2 15.1	6 22	
11	16 3919	B9 Ib	8.7	35 7.6	21 10	2 15.7	6 39	ADS 1263 B
12	16 3938	OB+	10.4	37 17.5	34 58	2 15.5	6 48	
13	---	OB	11.3	41 19.4	40 46	2 15.6	7 4	
14	16 4067	F8 Iab	6.5	53 44.9	30 4	2 16.3	7 52	F6 Ib, 105 Sge.
1	---	OB-(le)	10.5	18 33 49.3	17 42 15	2 12.6	2 22	
2	---	F8 I	10.8	53 2.1	8 8	2 13.6	3 44	
3	17 3799	F4 I	6.3	56 1.2	17 33	2 13.5	3 57	HR 7185, FF Aql; R
4	---	OB-	12.3	58 3.2	10 20	2 13.7	4 9	
5	---	A0 II(le)	11.1	19 12 36.3	30 34	2 13.6	5 7	
6	---	B9 Ib	10.8	19 30.1	30 30	2 13.9	5 35	
7	---	(B9 II)	12.2	29 20.8	25 52	2 14.2	6 16	
8	---	OB	11.8	31 35.7	4 47	2 14.8	6 25	
9	---	B9 II	11.4	34 47.0	16 56	2 14.6	6 38	
10	---	OB+r	11.4	36 25.9	55 30	2 13.9	6 44	
11	---	OB+r	12.2	37 35.9	54 53	2 14.0	6 49	
12	---	OBr	10.5	38 57.2	44 22	2 14.3	6 54	
13	---	A0 II	11.4	40 18.3	50 48	2 14.2	7 0	
14	---	B9 II	10.9	41 52.5	42 42	2 14.4	7 6	
15	17 4195	B8 II	9.2	59 37.6	57 14	2 14.9	8 15	
16	17 4206	F0 I	7.3	20 1 58.6	35 34	2 15.4	8 24	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
1	---	CBr	12.0	$18^h47^m49^s.6$	18°19' 2"	$2^m12^s.0$	3' 22"	
2	---	F5 I	10.3	52 5.9	4 46	2 12.4	3 40	
3	---	OB⁻	11.2	52 11.4	49 4	2 11.5	3 41	
4	18° 4085	B6 Ia+	8.1	19 25 13.2	11 37	2 13.2	5 59	B7 Ia
5	---	OB	11.2	36 55.0	42 50	2 13.0	6 45	
6	18 4179	OB⁻	7.5	37 0.9	34 6	2 13.2	6 46	
7	18 4186	F6 I	10.0	38 10.3	47 23	2 13.0	6 51	
8	---	B9 II	11.6	39 39.6	0 37	2 14.0	6 57	
9	---	OB⁺	11.0	41 17.5	17 24	2 13.7	7 3	
10	18 4213	B8 II	8.5	41 53.4	26 39	2 13.6	7 6	
11	---	OB	11.7	43 4.8	11 41	2 13.9	7 11	
12	17 4087	B7 IIIe	10.4	44 43.6	7 30	2 14.1	7 17	
13	17 4100	OB	9.7	46 2.6	6 22	2 14.1	7 22	
14	---	WN(7)	10.2	46 18.0	4 34	2 14.2	7 23	WN5
15	18 4264	OB⁻	9.9	48 6.0	27 0	2 13.8	7 30	
16	18 4276	OB⁺(ce)	6.2	50 7.9	32 32	2 13.8	7 36	O8f, 9 Sge
17	---	OB⁻	9.8	52 39.0	6 5	2 14.4	7 48	SV Sge
18	18 4431	F6 Ib	8.5	20 11 45.5	27 7	2 15.0	9 0	
1	---	OB⁻r	10.4	18 27 1.4	19 42 32	2 9.9	1 52	
2	19 3670	F0 II	9.4	29 35.6	57 19	2 9.6	2 4	
3	---	OB	11.7	47 29.6	27 17	2 10.6	3 21	
4	18 3976	A3 II	8.4	19 8 37.5	8 36	2 11.5	4 50	
5	---	B8 Ib	11.0	11 17.0	53 15	2 10.7	5 1	
6	19 4003	A3 II	10.5	22 29 9	41 16	2 11.3	5 48	
7	---	A1 Iab	11.6	29 11.9	51 17	2 11.4	6 15	
8	---	OB	11.2	30 [illegible].7	52 12	2 11.4	6 21	
9	---	A2 II	11.3	30 43.0	24 51	2 11.9	6 21	
10	---	OB	12.0	30 50.0	24 6	2 12.0	6 22	
11	19 4086	A0 Iab	10.3	35 6.4	19 21	2 12.2	6 39	
12	---	OB	11.2	36 31.4	49 10	2 11.7	6 45	
13	---	OB	10.9	36 41.0	46 57	2 11.8	6 45	
14	---	OB	10.5	38 55.2	48 37	2 11.8	6 54	
15	---	OB	11.0	40 17.4	57 10	2 11.7	7 0	
16	---	OB⁺	12.2	43 40.3	39 52	2 12.2	7 13	
17	---	A2 II	11.0	44 2.6	17 24	2 12.7	7 14	
18	---	OB⁻(ce)	10.8	45 27.8	48 41	2 12.1	7 20	
19	19 4162	OB⁻	7.4	46 31.7	32 7	2 12.5	7 24	B2 III
20	---	OB	11.3	46 41.5	50 34	2 12.1	7 25	
21	19 4198	OB⁺ce,le	9.8	51 29.0	21 2	2 12.9	7 43	
22	19 4266	OBce	10.2	20 1 18.4	50 45	2 12.9	8 21	
23	---	OB⁻	12.5	23 26.1	57 17	2 14.0	9 42	
1	---	(F8 I)	10.7	18 36 50.2	20 5 52	2 9.5	2 35	
2	20 4010	F0 II	8.3	57 4.9	47 29	2 9.1	4 2	
3	---	OB⁻	11.0	58 56.3	14 16	2 9.8	4 10	
4	19 4028	OB⁻h	6.6	19 25 43.1	8 41	2 10.9	6 1	
5	20 4168	B8 II	11.2	28 19.8	47 35	2 10.2	6 12	
6	19 4048	OB	10.1	29 9.8	5 31	2 11.1	6 15	
7	---	OB	11.5	32 14.6	43 23	2 10.4	6 27	
8	20 4200	F8 Iab	8.1	34 26.5	13 13	2 11.1	6 36	U Vul
9	19 4095	OBle,r	10.4	36 30.0	0 53	2 11.5	6 44	
10	---	OB⁻	11.2	37 8.5	26 43	2 11.0	6 47	
11	20 4220	B8 II	10.8	38 16.8	57 22	2 10.4	6 52	
12	20 4218	OB⁺h	6.2	38 17.1	21 37	2 11.1	6 52	B0.5 Ia, HR 7482
13	---	OB⁺r	11.5	40 33.5	51 19	2 10.6	7 1	
14	---	OB⁺	11.6	45 59.0	24 58	2 11.4	7 22	
15	---	OB⁻	12.2	48 31.1	40 53	2 11.2	7 32	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
16	20° 4304	OB⁻	10.2	$19^h49^m12^s.8$	20°17'40"	$2^m11^s.7$	7'35"	
17	---	OB⁻	12.2	50 5.0	56 56	2 11.0	7 38	
18	20 4449	OB(ce,le)	8.2	20 7 27.6	55 51	2 12.0	8 44	
19	---	OB⁺le,r	10.0	9 43.1	11 7	2 12.9	8 53	
1	---	OB	10.7	18 37 24.0	21 59 19	2 7.0	2 38	
2	---	F4 II	9.0	49 17.4	37 46	2 7.8	3 29	
3	---	F9 I	11.4	19 6 46.4	14 18	2 8.8	4 43	
4	---	B8 IIr	11.1	18 12.1	59 58	2 8.2	5 30	
5	---	OB⁻	12.5	21 1.9	25 23	2 9.1	5 42	
6	---	B9 II	11.7	27 57.4	15 12	2 9.6	6 10	
7	---	OB⁻r	12.0	29 53.7	29 49	2 9.4	6 18	R
8	20 4207	F2 II	10.8	35 48.9	12 3	2 10.0	6 42	
9	---	OB⁻	11.7	36 13.5	34 59	2 9.5	6 43	
10	---	OB⁻	12.3	39 6.1	46 33	2 9.4	6 55	
11	---	A0 II	12.2	42 13.8	57 47	2 9.4	7 7	
12	21 3912	F4 II	9.0	45 14.1	56 41	2 9.5	7 19	
13	---	B8 Iab	11.3	47 36.8	2 48	2 10.7	7 28	
14	---	OBce	11.3	47 52.6	19 1	2 10.4	7 30	
15	---	OB⁻	11.9	49 12.9	32 21	2 10.2	7 35	
16	---	OB⁻	11.6	53 24.1	53 36	2 10.0	7 51	
17	20 4350	OB	9.7	54 47.6	11 45	2 10.9	7 56	
18	21 4045	F4 II	9.6	20 2 49.3	55 53	2 10.5	8 27	
19	21 4088	OBce	6.7	9 9.8	43 31	2 11.2	8 51	B1 Ib; HR 7716
20	---	B8 II	11.5	22 34.3	11 57	2 12.6	9 39	
1	22 3466	F8 Ib	9.2	18 41 26.6	22 34 22	2 6.3	2 55	
2	---	OB⁻	11.6	19 10 25.5	16 11	2 9.6	5 34	R
3	22 3648	OB	5.3	15 36.6	56 3	2 6.9	5 20	B0.5 IV, 2 Vul; R
4	22 3655	A0 II	10.4	16 37.1	39 1	2 7.3	5 24	
5	22 3686	F2 II	9.2	22 35.9	38 1	2 7.6	5 48	
6	22 3687	OBce,le,h,r	10.0	22 38.1	40 31	2 7.6	5 48	B2 (V) pe; R
7	---	OB⁺r	11.5	34 2.9	38 45	2 8.1	6 35	
8	---	B9 Ia,h	12.0	38 5.0	24 36	2 8.6	6 51	
9	22 3762	OB⁻	11.0	38 27.2	26 2	2 8.6	6 52	
10	22 3836	OBce	9.7	48 59.3	42 12	2 8.8	7 34	B1 II
11	22 3837	A1 II	9.4	49 20.4	57 22	2 8.5	7 35	
12	22 3843	F5 I	10.0	51 11.5	29 8	2 9.2	7 42	
13	---	OB⁻	11.6	54 21.2	10 50	2 9.8	7 55	
14	---	OB⁻	12.6	54 58.4	17 55	2 9.6	7 57	
15	---	OB	11.6	56 39.6	57 9	2 9.0	8 4	
16	22 3876	F2 II	10.3	57 16.0	53 18	2 9.1	8 6	
17	---	OB⁺le	11.6	58 31.0	6 7	2 10.1	8 11	
18	21 4017	OB	10.2	59 11.8	9 3	2 10.1	8 13	
19	---	(A1 Ia)	12.9	59 18.4	40 15	2 9.5	8 14	
20	21 4027	OB	7.1	20 0 11.7	0 42	2 10.3	8 17	
21	---	OB⁺ce	11.9	2 47.3	12 4	2 10.2	8 27	
22	---	OB⁻	10.4	13 12.3	34 54	2 10.4	9 5	
23	21 4133	F3 II	7.6	14 14.6	14 31	2 10.9	9 9	
1	---	OB⁻	9.9	18 42 0.1	23 40 15	2 4.9	2 57	
2	23 3461	F7 Iab	6.0	46 10.9	27 29	2 5.3	3 15	H. 7079
3	---	(OB)	11.0	19 21 10.2	26 0	2 6.5	5 43	
4	23 3644	OB⁻	9.6	22 2.8	47 33	2 6.1	5 46	
5	---	(B7 II)	11.0	32 18.0	39 21	2 6.7	6 28	
6	---	OBh	11.8	33 3.0	12 54	2 7.3	6 31	
7	---	OB⁻	11.7	33 12.1	34 43	2 6.9	6 31	
8	---	F4 II	11.3	33 20.9	36 30	2 6.9	6 32	
9	---	B8 II	11.5	33 46.4	36 16	2 6.9	6 34	
10	23 3706	B8 Ia,h	8.9	33 49.3	44 40	2 6.7	6 34	B8 Ia

No.	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
11	---	A0 II	11.5	$19^h36^m19^s.8$	23°30'10"	2^m 7^s.1	6'44"	
12	---	OBr	12.2	37 27.2	1 52	2 7.8	6 48	
13	---	OB	12.3	38 0.0	24 1	2 7.4	6 51	
14	---	OB+	12.2	38 5.2	30 43	2 7.2	6 51	
15	23° 3730	B6 Iab,r	10.3	38 8.6	53 42	2 6.7	6 51	B8 Ib
16	---	OB	12.2	38 29.9	49 43	2 6.8	6 53	
17	---	OB(ce)h r	10.3	39 57.9	11 51	2 7.7	6 58	
18	23 3741	OB-(ce,r)	10.6	40 1.8	50 53	2 6.9	6 59	
19	---	OB(ce)r	9.8	40 3.9	18 53	2 7.6	6 59	
20	---	OB-	11.8	40 19.4	13 27	2 7.7	7 0	
21	---	OB-	11.3	40 37.4	31 28	2 7.3	7 1	
22	23 3745	OBce	9.4	40 42.0	20 38	2 7.6	7 1	B0.5 Ib
23	22 3781	OBr	10.2	40 58.9	9 1	2 7.8	7 2	B0 IV
24	---	OBce	10.5	41 1.1	10 56	2 7.8	7 3	ADS 12828 ABC
25	23 3747	OB-	11.3	41 2.0	19 4	2 7.6	7 3	B1 III
26	22 3782	OBce	9.6	41 3.1	10 34	2 7.8	7 3	
27	---	OB-	11.7	41 5.7	33 6	2 7.3	7 3	
28	---	OB	11.8	41 15.1	5 24	2 7.9	7 4	
29	---	OB-	10.8	41 24.6	14 0	2 7.8	7 4	
30	---	OB-	12.0	41 27.3	34 42	2 7.3	7 4	
31	---	OB	11.1	41 28.8	13 54	2 7.8	7 4	
32	---	OBr	11.0	41 36.4	56 16	2 6.9	7 5	
33	---	OBce	11.0	42 12.7	45 30	2 7.1	7 7	
34	---	OB	12.1	42 13.0	9 51	2 7.9	7 7	
35	---	A3 Ib	11.6	42 15.0	50 16	2 7.0	7 8	
36	---	OB-r	10.6	42 18.2	10 38	2 7.9	7 8	
37	---	OB-	11.0	42 27.8	35 46	2 7.4	7 8	
38	---	OBr	11.0	42 36.8	43 50	2 7.2	7 9	
39	---	OB	11.6	42 43.7	41 32	2 7.2	7 9	
40	---	OB-	12.0	42 44.6	39 26	2 7.3	7 9	
41	---	OB-	11.1	42 55.7	48 6	2 7.1	7 10	
42	23 3758	OB-	10.8	42 59.1	51 17	2 7.1	7 10	ADS 12871 AB
43	23 3759	OB+h,r	9.0	43 5.6	55 44	2 7.0	7 11	B0 II
44	23 3760	B8 Ia,h,r	8.0	43 17.1	49 14	2 7.1	7 12	B8 Ia
45	23 3762	OB	9.5	43 35.0	51 42	2 7.1	7 13	B0.5 III: nn
46	22 3800	OB-	9.6	43 40.1	4 20	2 8.1	7 13	B2 III. n
47	---	OB-	11.3	43 40.2	58 39	2 6.9	7 13	
48	23 3767	OB+ce,r	8.6	43 47.1	58 24	2 7.0	7 14	B1 Ia
49	---	OB-	11.9	45 0.8	39 58	2 7.4	7 18	
50	---	OB-	11.6	49 30.7	45 30	2 7.6	7 36	
51	---	OB(le)	11.6	52 21.5	13 14	2 8.4	7 47	
52	23 3834	OB-	10.3	52 42.8	19 59	2 8.3	7 48	
53	---	OB-h	11.9	52 45.2	24 1	2 8.2	7 49	
54	23 3835	OB-	10.0	52 50.0	20 39	2 8.3	7 49	
55	---	OB	11.6	53 7.0	22 34	2 8.2	7 50	
56	---	A1 II	11.0	53 36.9	34 34	2 8.0	7 52	
57	---	OB-	11.9	58 34.2	7 44	2 8.9	8 11	
58	---	OB	10.4	20 7 3.9	58 9	2 8.4	8 43	
59	23 4002	B9 Ib	10.2	21 57.2	37 34	2 9.9	9 37	
1	---	OB-	10.7	18 36 4.5	24 40 24	2 3.4	2 32	
2	---	OB	10.2	40 11.6	57 15	2 3.1	2 50	
3	24 3632	OB(ce,le)	9.4	19 3 51.4	42 59	2 4.1	4 31	
4	---	OB-	13.1	14 12.0	56 12	2 4.2	5 14	
5	---	OB-	11.8	25 50.5	14 43	2 5.7	6 2	
6	24 3786	A6 Ib	9.4	32 51.7	28 9	2 5.7	6 30	
7	---	OB	12.2	35 43.5	20 3	2 6.1	6 42	
8	24 3843	OBce,r	11.0	39 46.2	13 45	2 6.4	6 58	
9	---	OB-	12.4	42 11.4	17 44	2 6.5	7 7	
10	23 3756	A0 II,r	9.7	42 28.9	4 33	2 6.8	7 8	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
11	24° 3862	A4 II	11.1	$9^h43^m1\overset{s}{.}51$	24°32'39"	$2^m6\overset{s}{.}2$	7'11"	
12	23 3761	OB$^+$ce,h,r	9.1	43 16.5	12 8	2 6.6	7 12	B0 II:
13	23 3763	OB	10.5	43 38.2	12 0	2 6.7	7 13	
14	24 3873	OB$^-$ce	10.1	44 16.2	30 26	2 6.3	7 15	
15	24 3880	OB$^-$	11.0	44 51.9	25 45	2 6.4	7 18	
16	24 3881	OB(ce)	9.3	44 56.6	43 28	2 6.1	7 18	06f
17	24 3883	OB$^-$	10.3	45 14.8	26 17	2 6.5	7 19	
18	---	OB$^-$	11.0	45 28.9	38 41	2 6.2	7 20	
19	---	OB$^-$	11.3	45 39.0	31 43	2 6.4	7 21	
20	---	OB$^-$	11.9	48 22.7	4 50	2 7.1	7 32	
21	---	(B9 Ib)	11.9	48 54.9	52 26	2 6.1	7 34	
22	24 3914	A0 Iab	6.3	49 55.3	51 45	2 6.2	7 38	A0 Iab; HR 7593
23	---	A4 Ia	11.6	52 31.8	47 27	2 6.5	7 48	
24	---	OB	11.3	20 0 37.8	29 15	2 7.4	8 19	
25	24 4085	F6 Iab	8.7	16 5.1	20 41	2 8.6	9 16	
26	23 3986	B8 II	6.3	19 54.4	17 8	2 9.0	9 30	25 Vul; R
27	---	OB$^-$	10.4	23 21.8	5 34	2 9.4	9 42	
1	24 3721	F4 II	10.4	19 18 43.9	25 1 44	2 4.3	5 33	
2	25 3852	F1 I	11.1	27 37.1	54 32	2 3.6	6 9	
3	---	OB$^-$	11.0	36 39.2	6 20	2 5.1	6 45	
4	---	OBce,h,r	10.8	38 17.6	9 48	2 5.1	6 52	
5	---	OB	11.8	40 0.8	8 9	2 5.3	6 59	
6	---	A1 Ib	12.3	42 9.6	14 0	2 5.3	7 7	
7	24 3866	OBr	10.8	43 34.8	0 13	2 5.6	7 13	O8f
8	25 3952	OBce	10.8	43 36.7	13 54	2 5.3	7 13	O8
9	---	OB$^-$	12.4	44 29.5	4 5	2 5.6	7 16	
10	25 3970	A0 II	9.9	45 37.3	21 20	2 5.3	7 21	
11	---	OB$^-$	11.6	46 5.9	12 42	2 5.5	7 23	
12	25 3974	OB	11.0	46 7.8	57 33	2 4.6	7 23	
13	---	OB	12.2	46 36.3	41 5	2 4.9	7 25	
14	---	OB	11.8	47 37.8	53 49	2 4.7	7 29	
15	---	OBh,r	12.6	48 45.0	52 22	2 4.8	7 33	
16	---	OB$^-$	12.0	48 49.9	55 4	2 4.8	7 33	
17	25 3998	OB$^-$ce	10.6	48 57.9	49 33	2 4.9	7 34	
18	---	OBr	11.3	55 33.1	1 13	2 6.4	7 59	
19	---	OB	12.5	56 16.3	36 2	2 5.7	8 2	
20	---	OB	11.7	56 54.5	3 13	2 6.4	8 5	
21	24 4050	OB	10.4	20 12 7.3	1 35	2 7.5	9 2	
22	---	F1 II	11.1	34 2.6	55 28	2 8.2	10 20	
23	25 4347	A7 II	7.5	41 10.7	38 38	2 9.2	10 44	
24	---	A4 Ib	10.6	44 10.0	53 39	2 9.2	10 54	
1	---	F4 II	10.7	19 13 22.5	26 29 4	2 2.1	5 10	
2	---	OB$^-$	11.9	30 37.6	29 21	2 2.9	6 21	
3	---	B9 II	11.9	39 10.6	54 0	2 2.9	6 55	
4	---	OB$^-$	12.3	40 29.6	26 44	2 3.6	7 1	
5	---	OB$^-$	12.4	40 36.2	29 43	2 3.5	7 1	
6	---	OB$^-$	12.3	47 10.7	40 3	2 3.7	7 27	
7	---	OB	13.0	47 34.6	13 37	2 4.3	7 29	
8	---	OB$^-$	12.8	48 9.0	50 56	2 3.5	7 31	
9	---	OB$^-$	12.3	48 31.3	3 23	2 4.6	7 32	
10	---	OB	12.4	51 23.4	44 31	2 3.9	7 43	
11	---	OB$^-$h	12.6	53 56.5	38 46	2 4.2	7 53	
12	26 3741	F8 Ia	6.2	55 23.9	25 16	2 4.6	7 59	X Vup
13	---	OB$^+$r	12.1	57 22.6	43 21	2 4.3	8 6	
14	25 4083	OB$^-$le	9.6	20 1 55.2	7 45	2 5.4	8 24	B1 III
15	---	A0 II	11.3	9 3.4	15 24	2 5.8	8 50	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
16	25° 4238	OB⁻	9.4	$20^h24^m37^s1$	26° 3' 14"	2^m 7^{s}3	9' 47"	
17	---	G0 Ib	10.5	35 16.6	48 9	2 7.4	10 24	
1	---	OB⁻	12.5	19 3 51.7	27 38 4	2 0.0	4 31	
2	27 3314	F6 Ib	6.7	13 59.1	50 13	2 0.2	5 13	F6 II: HR 7308
3	27 3334	A4 Ib(le)r	10.1	16 19.1	45 31	2 0.4	5 23	EP Lyr
4	---	OBle,h	12.1	26 50.3	3 50	2 2.0	6 6	
5	27 3406	F2 II	9.6	27 21.1	57 44	2 0.7	6 8	
6	---	A4 Ib	10.7	32 24.8	14 51	2 2.0	6 28	
7	---	OB⁺	10.7	36 8.9	4 21	2 2.5	6 43	
8	---	OB	11.7	41 36.7	26 21	2 2.3	7 5	
9	---	OB⁻h	11.9	42 40.7	43 51	2 2.0	7 9	
10	27 3513	A2 Iab	8.7	44 56.4	55 16	2 1.9	7 18	A2 Ia
11	---	OB⁻	12.4	45 28.9	18 40	2 2.7	7 20	
12	---	OB	12.2	46 21.4	41 2	2 2.3	7 24	
13	---	OB⁻	11.9	46 30.2	45 32	2 2.2	7 24	
14	---	OB⁻	11.2	47 24.1	20 16	2 2.9	7 28	
15	---	OB(ce)	11.0	48 21.4	20 15	2 2.9	7 32	
16	26 3687	A0 Ib-II	10.1	48 57.2	0 9	2 3.4	7 34	
17	27 3534	OB⁻	7.6	49 2.0	35 18	2 2.6	7 34	
18	27 3536	F8 Ia	8.2	49 27.8	19 53	2 3.0	7 36	SV Vup
19	---	OB⁻	12.6	49 49.6	17 16	2 3.1	7 37	
20	27 3538	F6 Ib	9.6	50 0.1	50 20	2 2.4	7 38	
21	---	OB⁻	12.0	50 6.1	48 7	2 2.4	7 38	
22	---	OB	10.5	50 7.8	55 53	2 2.3	7 39	
23	---	OB⁻	12.1	50 16.4	23 42	2 3.0	7 39	
24	---	OB⁻	12.0	50 24.5	20 46	2 3.0	7 40	
25	---	B8 II	12.6	51 12.9	19 58	2 3.1	7 43	
26	---	OB⁻	10.3	51 24.5	35 28	2 2.8	7 43	
27	---	OB⁻	12.0	51 33.9	25 36	2 3.0	7 44	
28	---	OB⁻	12.4	51 45.1	7 37	2 3.4	7 45	
29	---	OB	11.7	56 20.4	52 56	2 2.8	8 2	
30	---	OB⁻	12.6	56 26.6	58 39	2 2.7	8 3	
31	---	OB⁻h	12.6	20 1 36.7	0 20	2 4.3	8 23	
32	---	OB	12.3	25 29.3	25 13	2 5.7	9 50	
33	---	F2 II	11.8	26 37.5	15 37	2 6.0	9 54	
34	27 3768	(G2 I)	7.9	28 19.3	39 50	2 5.7	10 0	
35	27 3836	OB⁻	9.1	40 20.4	34 35	2 7.0	10 41	
1	27 3280	F4 II	9.5	19 10 2.6	28 5 34	1 59.7	4 57	
2	---	OB⁺	11.2	18 43.0	9 35	1 60.0	5 33	R
3	28 3304	A1 II	10.3	20 7.4	34 17	1 59.5	5 38	
4	---	F3 (II)	10.7	28 20.3	42 44	1 59.8	6 12	
5	28 3445	F2 II	8.6	40 34.8	13 42	2 1.2	7 1	
6	28 3456	A0 II	10.3	42 21.9	56 51	2 0.3	7 8	ADS 12859 A
7	---	WNh	10.5	44 14.3	8 56	2 1.6	7 16	WN, HD 186943
8	---	OB⁻	11.9	44 31.2	40 43	2 0.9	7 17	
9	27 3512	OBce	9.0	44 37.1	7 13	2 1.6	7 17	07
10	28 3487	OB	10.5	47 24.0	48 34	2 0.9	7 28	
11	---	OB	12.0	47 38.7	5 43	2 1.9	7 29	
12	---	OB	11.3	48 6.4	0 22	2 2.0	7 31	
13	---	OB⁻	11.6	49 49.5	33 59	2 1.4	7 37	
14	27 3550	A2 Iab,r	9.9	52 4.9	12 16	2 2.0	7 46	B9 Ia
15	28 3524	A0 II	11.0	52 31.0	59 0	2 1.0	7 48	
16	---	OB	12.8	54 4.6	52 24	2 1.3	7 54	
17	---	OB⁻	12.6	54 13 5	43 6	2 1.5	7 54	
18	---	OB⁻	12.8	55 42.7	57 26	2 1.3	8 0	
19	---	OB	10.8	55 45.4	49 2	2 1.5	8 0	
20	27 3570	OBr	10.8	55 51.5	11 40	2 2.3	8 1	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
21	28° 3598	OBce,le,r	10.4	$20^h\ 1^m\ 8^s.7$	28°33' 51"	$2^m\ 2^s.3$	8' 21"	B0 III: np
22	---	OB	12.2	1 57.8	22 47	2 2.6	8 24	
23	---	B9 Ib	11.9	3 51.3	15 57	2 2.9	8 31	
24	---	OBr	11.7	22 18.2	51 29	2 3.7	9 39	
25	---	OB^-	11.0	41 47.8	39 31	2 4.2	9 47	
26	---	F4 II	10.5	31 54.0	7 6	2 5.5	10 12	
27	---	OB	10.6	33 3.3	20 22	2 5.4	10 16	
28	---	F3 II	11.3	36 35.7	6 59	2 6.0	10 28	
1	29 3514	F2 II	8.3	19 10 29.8	2[illegible] 19	1 57.0	4 59	
2	---	OB^+	12.6	12 14.9	[illegible]3	1 58.2	5 6	R
3	---	OB^-	10.7	18 50.5	[illegible]	1 58.5	5 33	
4	---	OBle	11.4	19 13.5	[illegible]5.	1 58.5	5 35	
5	---	Pec	12.0	21 55.2	34 3[illegible]	1 58.1	5 46	R
6	---	Pec	11.7	23 55.3	34 33	1 58.3	5 54	R
7	---	F3 II	11.7	28 26.3	52 58	1 58.1	6 12	
8	---	OB	10.0	31 26.2	51 9	1 58.3	6 25	
9	29 3660	OB^-	9.0	34 11.7	42 32	1 58.7	6 36	
10	28 3434	OB	8.7	39 19.8	1 36	2 0.0	6 56	B1 Ib,p
11	29 3724	A2 II	8.5	43 4.7	28 27	1 59.7	7 11	
12	29 3735	A1 II	9.7	44 16.1	17 12	2 0.0	7 16	
13	---	OB^-	11.4	45 51.3	20 51	2 0.0	7 22	
14	29 3753	F3 II	9.6	46 40.1	56 3	1 59.3	7 25	
15	29 3754	B7 II	6.9	46 41.6	16 35	2 0.2	7 25	
16	---	OB^-	12.0	47 57.0	42 34	1 59.7	7 30	
17	---	A0 Iab	11.1	48 2.4	45 54	1 59.6	7 30	
18	29 3772	OB^+(cl,r)	10.6	48 44.6	16 8	2 0.4	7 33	07f
19	29 3774	OB	10.5	48 51.0	16 31	2 0.4	7 34	B2 Ib
20	---	OB	12.4	49 53.4	41 30	1 59.9	7 38	
21	29 3779	F0 I	10.3	50 13.1	16 41	2 0.5	7 39	
22	---	OB^-	11.7	50 27.7	17 19	2 0.5	7 40	R
23	29 3791	F8 I	10.2	51 39.4	42 25	1 60.0	7 45	
24	---	OB^-	12.2	52 16.6	32 31	2 0.3	7 47	
25	---	OB^-	11.4	54 6.6	34 9	2 0.4	7 54	
26	---	OB^+	12.2	54 35.4	34 51	2 0.4	7 56	
27	29 3814	OBce	10.6	54 39.3	51 25	2 0.0	7 56	B0 V
28	---	OB	11.2	55 15.7	51 7	2 0.0	7 58	
29	---	OB^-r	12.6	55 16.5	5 8	2 1.1	7 58	
30	---	OB^-	12.6	55 33.6	25 42	2 0.7	8 0	
31	---	OBce	10.7	57 3.3	53 20	2 0.2	8 5	
32	---	OB^-	12.9	58 49.2	26 11	2 0.9	8 12	
33	---	OB	11.6	59 18.1	35 42	2 0.7	8 14	
34	29 3861	F5 Iab	9.2	59 53.9	45 13	2 0.6	8 16	
35	---	OB	12.7	20 1 30.1	42 15	2 0.8	8 22	
36	---	OB^-	12.4	2 28.6	2 36	2 1.7	8 26	
37	---	OB	12.2	2 43.0	5 17	2 1.7	8 27	
38	---	OB	12.3	2 44.1	5 5	2 1.7	8 27	
39	---	OB	11.8	2 45.3	1 14	2 1.8	8 27	
40	---	OB^-	12.2	3 3.6	4 5	2 1.8	8 28	
41	28 3612	F2 Ia	10.9	3 24.2	12 19	2 1.6	8 29	
42	---	A3 (II)	11.7	5 43.8	34 8	2 1.3	8 38	
43	29 3973	OB^-ce	9.3	15 6.4	57 23	2 1.7	9 13	
44	---	F4 II	11.5	32 44.6	20 57	2 4.1	10 15	
45	---	F3 Ib	10.6	38 26.7	19 21	2 4.7	10 35	
46	---	OB	12.7	47 33.9	53 46	2 5.0	11 5	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
1	---	OB	13.4	$19^h\ 6^m 13^s.2$	$30^\circ\ 6'11"$	$1^m 56^s.5$	4'41"	
2	30° 3482	F7 I	10.9	12 38.6	58 7	1 55.6	5 8	
3	30 3559	OB	9.7	24 16.0	59 12	1 56.2	5 56	
4	30 3639	WC8,h	10.3	32 47.5	24 21	1 57.6	6 30	WC8
5	30 3689	OB	10.4	39 4.0	31 12	1 57.9	6 55	
6	---	OB	10.9	53 27.0	1 46	1 59.7	7 51	
7	30 3808	A0 II	9.4	53 32.3	22 44	1 59.2	7 52	
8	---	OBle,h,r	11.9	54 33.3	58 12	1 58.5	7 56	
9	---	OBr	12.9	55 0.2	42 32:	1 58.9	7 57	
10	---	OB	12.6	55 37.8	40 9	1 59.0	8 0	
11	---	OB	11.3	55 41.4	13 13	1 59.6	8 0	
12	---	OBce	10.8	55 46.9	53 11	1 58.7	8 0	
13	---	OB	12.2	56 32.7	26 13	1 59.4	8 3	
14	---	OB"	12.6	57 1.8	27 32	1 59.4	8 5	
15	---	OB"	12.6	58 15.1	43 50	1 59.1	8 10	
16	29 3842	OBce(le)	10.6	58 33.5	14 35	1 59.8	8 11	B1 V: e:
17	---	OB"	11.6	58 38.5	17 35	1 59.7	8 11	R
18	---	OBce	11.6	58 46.0	13 14	1 59.8	8 12	
19	---	OB	12.1	59 7.8	22 1	1 59.7	8 13	
20	---	OB	11.2	59 31.0	22 15	1 59.7	8 15	
21	---	OB"	11.5	20 0 1.0	13 6	1 60.0	8 17	
22	---	OB"	12.6	0 15.6	44 0	1 59.3	8 18	
23	---	OB"	12.1	0 41.0	16 36:	1 59.9	8 19	
24	---	OB	12.5	1 21.5	16 45	1 60.0	8 22	
25	30 3887	A6 Ib	11.3	3 56.5	16 5	2 0.2	8 31	
26	---	B9 II	12.0	7 46.1	6 30	2 0.8	8 46	
27	30 3963	OB	10.5	13 36.1	59 18	2 0.2	9 7	
28	---	OB	12.5	14 23.8	17 56	2 1.1	9 10	
29	30 3980	B9 Ib-II	9.0	16 25.4	39 51	2 0.9	9 18	B9 Ib-II
30	---	OB"	12.1	16 48.5	53 2	2 0.6	9 19	
31	30 4021	F2 II	10.8	22 56.5	52 45	2 1.2	9 41	
32	29 4057	F4 Ib	5.1	27 21.1	12 2	2 2.5	9 57	F5 II, 41 Cyg
33	30 4097	OB	9.1	34 34.3	36 55	2 2.8	10 22	
34	---	OB"	12.5	34 38.7	13 11	2 3.3	10 22	
35	---	OB	12.3	46 28.8	3 9	2 4.7	11 1	
36	---	OB"	10.6	56 40.8	54 57	2 4.9	11 34	
37	30 4318	F8 Iab	6.7	21 4 24.2	59 0	2 5.8	11 58	F5.5 I-II, DT Cyg; R
1	30 3526	A0 Ib-II, le	9.8	19 19 44.2	31 3 59	1 55.8	5 37	R
2	---	F8 I	10.6	22 50.1	10 26	1 55.9	5 50	
3	30 3645	OB"	7.0	33 35.3	9 54	1 56.6	6 33	
4	---	OB	12.0	36 14.0	27 58	1 56.3	6 44	
5	31 3765	OBce	7.2	44 19.6	59 34	1 56.2	7 16	07.5
6	---	OBce	12.1	45 53.6	41 53	1 56.7	7 22	
7	30 3751	F2 II	9.6	46 10.5	8 18	1 57.6	7 23	
8	---	B8 II	11.4	47 28.4	22 28	1 57.3	7 28	
9	31 3797	F3 Ia	9.9	47 32.1	19 38	1 57.4	7 29	
10	---	OB"	11.2	50 55.0	4 24	1 58.0	7 42	
11	---	OB	11.8	53 23.2	9 1	1 58.1	7 51	
12	---	OB"	12.6	54 27.2	19 57	1 58.0	7 55	
13	---	OBr	11.9	56 17.8	56 34	1 57.3	8 3	
14	31 3870	A0 fbr	9.8	56 57.5	28 56	1 58.0	8 5	
15	---	A I pec	12.0	56 58.0	42 6	1 57.7	8 5	R
16	---	OB	11.9	57 11.7	1 31	1 58.6	8 6	
17	---	OB	11.9	58 48.3	41 43	1 57.8	8 12	
18	---	OB"	11.7	58 49.5	43 27	1 57.8	8 12	
19	---	OB	13.2	59 26.2	49 8:	1 57.7	8 14	
20	---	A0 Ib	12.3	59 36.4	39 29	1 58.0	8 15	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
21	---	OB	12.2	$19^h59^m39^s.7$	$31^\circ57'47''$	$1^m57^s.5$	8' 15"	
22	31° 3907	F8 I	9.4	20 1 13.6	4[illegible] 41	1 57.9	8 21	
23	31 3933	OB⁻	10.0	3 36.4	38 22	1 58.3	8 30	
24	31 3996	B9 Iab	10.8	11 41.4	55 47	1 58.7	9 0	
25	31 4001	OB·	7.4	12 17.1	50 42	1 58.9	9 2	B2 III
26	---	B9 II	12.0	28 1.2	2 48	2 1.5	9 59	
27	31 4126	OB⁻ce	7.8	31 3.7	29 9	2 1.3	10 9	
28	---	OB⁻	11.0	36 11.8	7 7	2 2.3	10 27	
29	31 4191	OB	10.6	40 41.8	36 36	2 2.2	10 42	
30	31 4204	OB⁻	7.9	42 23.9	30 49	2 2.5	10 48	
31	---	B9 II	11.2	42 39.4	35 15	2 2.5	10 49	
32	31 4218	OB⁻ce	9.0	44 59.5	58 23	2 2.3	10 57	
33	---	OB⁺	11.9	46 2.8	3 0	2 3.5	11 0	
34	---	OB	12.8	46 39.1	25 5	2 3.2	11 2	
35	---	OB⁺	12.7	47 4.3	19 47	2 3.3	11 3	
36	---	OBle	11.5	52 40.5	52 27	2 3.3	11 22	
37	30 4282	OBce	10.0	59 4.4	5 20	2 5.0	11 42	
1	---	F8 I	11.3	19 36 16.8	32 22 30	1 55.0	6 44	
2	32 3526	A5 Ib	8.1	39 44.4	57 53	1 54.4	6 58	
3	---	A4 II	11.8	40 52.3	30 42	1 55.1	7 2	
4	32 3583	OBce,h	9.1	47 37.6	49 46	1 55.2	7 29	B1 V: pe
5	---	OB⁻	11.1	51 13.6	9 59	1 56.5	7 43	
6	---	OB⁻	11.1	52 29.7	10 56	1 56.6	7 48	
7	---	OB⁻	11.8	52 53.1	27 16	1 56.2	7 49	
8	32 3647	B9 II	9.3	56 29.4	32 15	1 56.4	8 3	
9	---	OB	12.1	56 57.9	27 56	1 56.6	8 5	
10	---	OB	12.1	57 12.6	50 43	1 56.1	8 6	
11	---	OB⁻	12.0	58 48.0	50 44	1 56.2	8 12	
12	---	WC7	13.5	59 43.0	26 2	1 56.9	8 16	HD 190002
13	31 3921	OB⁺	9.2	20 2 13.8	0 48	1 57.7	8 25	B1 Ib
14	---	OB	11.7	2 25.0	3 34	1 57.6	8 26	
15	31 3925	OB⁺	6.1	2 38.4	4 33:	1 57.6	8 27	B1.5 Ia^+?, HR 7678, R
16	31 3948	F0 II	10.9	5 18.0	11 16	1 57.7	8 37	
17	32 3713	A3 Ib	10.7	5 37.9	37 43	1 57.2	8 38	
18	---	OB	11.1	7 43.4	18 46	1 57.8	8 46	
19	32 3749	OB	10.8	11 43.3	23 55	1 58.1	9 0	B0: pe
20	---	OB⁺	11.4	12 38.6	17 36:	1 58.3	9 4	
21	32 3761	A2 Ia^+	10.2	14 16.3	31 43	1 58.2	9 10	
22	31 4018	OBce:le	7.0	14 49.7	13 29	1 58.6	9 12	B1 V: pnne
23	---	F4 II	12.0	21 55.8	28 32	1 59.0	9 37	
24	---	OB⁻	11.5	23 8.7	22 48	1 59.3	9 42	
25	---	OB	11.2	29 7.6	42 44	1 59.5	10 3	
26	---	OB⁻	12.5	40 11.9	54 43	2 0.5	10 41	
27	---	F4 II	11.5	49 50.4	41 46	2 2.0	11 12	
28	31 4300	OB⁻	9.0	57 27.2	0 4	2 3.8	11 37	
1	---	OB	13.1	19 11 11.3	33 24 48:	1 51.7	5 2	
2	33 3409	OBce	6.2	17 11.5	17 47	1 52.3	5 27	HR 7335
3	---	F4 II	11.0	34 52.0	28 17	1 53.2	6 39	
4	33 3573	B8 Ib	9.8	42 15.1	48 56	1 53.3	7 8	
5	---	OB⁺ce	10.3	43 23.7	51 5	1 53.3	7 12	
6	33 3602	OB(ce)	6.3	46 56.0	18 40	1 54.5	7 26	B0.5 Ia, HR 7551
7	32 3594	F6 Ib	9.7	48 44.1	8 54	1 54.9	7 33	
8	33 3618	OB	10.4	48 53.0	32 10	1 54.3	7 34	B1 Ib
9	---	OB⁻	12.0	49 15.6	56 35	1 53.7	7 35	
10	---	OB	11.4	51 35.4	19 30	1 54.8	7 44	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
11	33° 3652	F2 Ib	9.7	$19^h53^m17^s.0$	33°21'49"	$1^m54^s.9$	7'51"	
12	---	OB+ce	11.5	56 52.4	30 57	1 55.0	8 5	
13	---	OB-	12.0	58 21.6	12 32	1 55.6	8 10	
14	---	(Of)	12.6	58 23.7	7 30	1 55.8	8 11	
15	---	OBr	11.7	59 5.0	15 24	1 55.6	8 13	
16	---	OB-	11.7	59 7.1	11 45	1 55.7	8 13	
17	---	OBh	12.1	20 0 0.2	12 17	1 55.8	8 17	
18	---	OB	12.4	0 14.0	14 56	1 55.8	8 18	
19	33 3697	F8 Ia	9.7	0 32.6	37 43	1 55.2	8 19	
20	---	OB-	11.1	0 39.0	24 28	1 55.6	8 19	
21	33 3708	OB	8.5	1 22.8	18 30	1 55.8	8 22	
22	---	OB-	10.5	2 8.3	25 46	1 55.7	8 25	
23	33 3717	OB	10.8	2 31.5	33 46	1 55.5	8 26	07:
24	---	F2 II	11.0	3 33.0	28 15	1 55.8	8 30	
25	33 3729	F4 Ia	10.1	3 38.1	35 34	1 55.6	8 30	
26	---	F4 II	12.0	3 57.4	26 36	1 55.8	8 32	
27	---	OBle,h	12.2	4 22.9	12 42	1 56.2	8 33	
28	33 3746	F4 Ib	10.0	5 47.1	30 30	1 55.9	8 38	
29	---	(OBle)	11.0	8 7.9	40 46	1 55.9	8 47	
30	32 3743	OB-	9.3	11 31.1	13 50	1 56.9	9 0	
31	32 3752	OB	10.6	12 22.7	17 2	1 56.9	9 3	B2 Vn
32	---	OB-	12.2	22 36.2	56 50	1 57.1	9 40	
33	---	(A4 II)	10.9	24 35.4	38 44	1 57.7	9 47	
34	33 3960	OB+	11.1	33 22.0	50 18	1 58.5	10 18	
35	---	OB+h	12.0	35 52.3	17 16	1 59.5	10 26	
36	33 3998	F4 II	10.3	40 52.1	55 40	1 59.3	10 43	
37	---	OB	12.3	21 0 40.2	4 40	2 2.9	11 47	
38	32 4060	OB	7.5	5 51.7	11 40	2 3.5	12 3	
1	---	OB+	11.4	19 20 5.5	34 57 6:	1 49.8	5 39	
2	---	OB-	12.1	42 37.0	38 43	1 52.1	7 9	
3	34 3707	OB	10.6	44 49.2	31 50	1 52.4	7 18	B3: II:
4	34 3713	OB	10.6	45 31.1	29 25	1 52.5	7 21	
5	---	B9 II	12.0	57 49.2	51 9	1 53.2	8 8	
6	---	OB	10.8	20 3 9.3	49 36	1 53.7	8 29	
7	34 3867	A9 Ib	8.7	3 43.0	46 15	1 53.9	8 31	
8	---	OBr	12.0	4 37.9	23 16	1 54.5	8 34	
9	34 3874	OBce	8.9	4 46.9	45 58	1 54.0	8 35	B0 III, ADS 13391 AB
10	34 3881	B7 Ib	6.0	5 46.5	16 37	1 54.8	8 38	B5 Ib, HR 7699
11	---	OB+r	12.5	6 11.6	5 28:	1 55.1	8 40	
12	---	OB-	10.8	7 55.1	58 57	1 54.0	8 46	R
13	34 3920	OBce,r	8.8	11 24.2	52 24	1 54.5	8 59	07
14	---	OB-	12.2	11 45.1	51 47	1 54.6	9 1	
15	---	OBr	12.8	12 8.1	43 1	1 54.8	9 2	
16	---	OB-	12.0	12 35.1	51 42	1 54.7	9 4	
17	---	OB-	10.5	13 18.9	51 12	1 54.8	9 6	
18	34 3952	OB-le,r	10.6	14 35.6	57 14	1 54.8	9 11	B3 II
19	34 3961	OBr	10.2	15 58.7	39 39	1 55.4	9 16	O9.5 Ib
20	34 3967	F7 I-II	6.1	16 43.7	49 32	1 55.2	9 19	F5 Ib, 35 Cyg
21	33 3910	F2 Iab	6.4	25 10.5	9 48	1 57.1	9 49	F3 II, HR 7823
22	33 3923	F7 I-II	10.1	27 37.5	2 42	1 57.6	9 58	
23	---	OB-	12.2	39 8.0	42 7	1 58.1	10 37	
24	34 4152	A0 Ib	10.0	45 2.1	24 37	1 59.2	10 57	
25	---	OB-	12.2	45 35.4	53 43	1 58.7	10 59	
26	---	OB+ce	11.0	46 13.9	16 22	1 59.6	11 1	
27	---	OB	12.9	46 23.3	15 27	1 59.6	11 1	
28	34 4184	OB	7.2	50 3.6	28 9	1 59.8	11 13	Y Cyg
29	---	F4II	11.9	52 14.1	42 47	1 59.8	11 20	
30	---	OBr	12.4	21 2 2.8	21 14	2 1 6	11 51	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
1	---	A3 Ia	11.3	$19^h17^m38^s.7$	$35^\circ14'54''$	$1^m49^s.1$	5'29"	
2	34° 3631	OB$^-$	10.0	34 55.7	7 58	1 50.6	6 39	B2 V
3	35 3773	F1 II	9.3	42 3.9	18 23	1 51.0	7 7	
4	---	OB	12.1	42 51.2	26 24	1 5[illegible].8	7 10	
5	---	OB$^-$r	10.7	49 32.5	36 56	1 51.2	7 37	
6	---	B9 II	11.9	49 36.9	56 12	1 50.7	7 37	
7	35 3837	F7 *i*	9.3	49 37.0	41 58	1 51.0	7 37	
8	34 3815	OB$^+$r	9.7	56 28.9	3 55	1 52.7	8 3	B0 Ib
9	34 3828	OBce	9.4	57 56.3	10 17	1 52.7	8 9	O 7
10	---	OB$^-$	11.5	59 18.5	51 3	1 51.8	8 14	
11	35 3915	OB$^-$	10.4	59 22.9	49 6	1 51.8	8 14	
12	---	(OB$^-$)	11.7	59 24.5	12 27	1 52.8	8 15	
13	---	OB$^-$r	11.2	59 52.2	24 45	1 52.5	8 16	
14	35 3924	OBce	10.3	20 0 29.3	32 [illegible]	1 52.4	8 19	
15	34 3850	OBce(le)	9.4	0 30.2	10 15	1 52.9	8 19	ADS 13292 A
16	34 3850	OB$^-$	10.9	0 31.6	10 13	1 52.9	8 19	ADS 13292 B
17	---	OBr	10.9	0 33.0	31 50	1 52.4	8 19	
18	---	OB$^-$	11.5	0 43.2	8 30	1 53.0	8 19	
19	---	OB$^-$	11.9	1 10.8	32 41	1 52.4	8 21	
20	35 3929	OB$^-$(ce)r	9.9	1 35.5	53 36	1 52.0	8 23	ADS 13312 C
21	---	OB	11.2	1 36.1	33 10	1 52.5	8 23	
22	---	OB(ce)	11.4	1 36.8	22 17	1 52.8	8 23	
23	35 3930	OB$^+$	6.6	1 37.1	53 19	1 52.0	8 23	ADS 13312 AB
24	35 3932	OB$^-$ce	9.5	2 0.1	25 30	1 52.7	8 24	
25	---	A0 Ib	11.3	2 13.0	40 59	1 52.3	8 25	
26	---	OB$^-$	11.7	3 27.5	35 10	1 52.6	8 30	
27	35 3948	OB$^-$	9.2	3 43.5	28 46	1 52.8	8 31	ADS 13361 B
28	35 3949	OB	8.2	3 46.9	27 50	1 52.8	8 31	ADS 13361 A
29	---	OB$^-$	11.7	3 47.9	5 37	1 53.4	8 31	
30	35 3950	OBce,le,h	8.9	3 52.7	45 25	1 52.4	8 31	
31	35 3952	OB	7.0	4 3.3	31 50	1 52.8	8 32	
32	---	OB$^-$	10.4	4 3.8	38 45	1 52.6	8 32	ADS 13374 D
33	35 3953	OB$^+$le(r)	7.2	4 4.6	38 39	1 52.6	8 32	WN5 + O9.5 III,r
34	35 3955	OBr	7.2	4 6.0	39 11	1 52.6	8 32	ADS 13374 F
35	35 3957	OBr	8.2	4 8.6	37 16	1 52.6	8 32	ADS 13376 D
36	---	OB	11.1	4 10.4	48 50	1 52.4	8 33	
37	34 3871	OB	8.4	4 16.6	14 29	1 53.2	8 33	B1 Ib-II, V448 Cyg
38	---	OB	10.9	4 22.0	42 22	1 52.5	8 33	
39	---	OB$^-$	11.5	4 23.2	29 38	1 52.9	8 33	
40	---	OB$^-$	10.6	4 29.5	34 14	1 52.8	8 34	
41	---	OB$^-$	11.5	5 1.2	10 23	1 53.4	8 36	
42	---	OB	10.6	5 8.0	31 28	1 52.9	8 36	
43	35 3970	OB	7.2	5 30.7	34 34	1 52.9	8 38	ADS 13405 AB
44	---	OB	11.1	5 50.1	52 9	1 52.5	8 39	
45	35 3976	OB$^-$	10.1	6 3.7	31 0	1 53.0	8 40	
46	35 3981	A2 Ia,h	10.2	6 12.2	58 43	1 52.3	8 40	V425 Cyg
47	---	OB	10.3	6 35.4	56 57	1 52.4	8 42	
48	35 3986	OBle	10.7	6 59.2	26 11	1 53.2	8 43	
49	35 3987	OB$^-$	8.2	7 0.1	21 56	1 53.3	8 43	ADS 13429 AB
50	---	B8 II	11.5	7 2.8	29 12	1 53.2	8 43	
51	---	OB$^-$	11.1	7 4.9	19 35	1 53.4	8 43	
52	35 3993	OBce	9.8	7 19.1	54 11	1 52.6	8 44	
53	35 3994	OB$^-$r	7.7	7 20.7	20 22	1 53.4	8 44	
54	35 3995	OB	8.1	7 35.4	35 17	1 53.1	8 45	
55	35 3996	OB	10.8	7 44.8	50 46	1 52.7	8 46	
56	---	OB$^-$	10.2	7 56.7	16 57	1 53.6	8 47	
57	35 3998	OBce,h	9.3	8 4.9	20 51	1 53.5	8 47	
58	---	OB$^-$	10.6	8 32.6	45 41	1 52.9	8 49	
59	35 4004	OBce	9.1	8 45.4	43 31	1 53.0	8 50	
60	35 4006	OB$^-$(ce)	7.9	9 4.0	48 14	1 52.9	8 51	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
61	---	OB⁻r	10.8	$20^h\ 9^m\ 6^s.4$	$35^\circ 36' 28''$	$1^m 53^s.2$	8'51"	R
62	---	OB⁻	11.7	9 18.9	57 52	1 52.7	8 52	
63	---	OB	10.6	9 25.4	43 42	1 53.1	8 52	
64	35° 4008	OB⁻	9.6	9 25.9	40 50	1 53.1	8 52	ADS 13486 AB
65	---	OB⁻	10.6	9 32.7	41 58	1 53.1	8 53	ADS 13490 AB
66	---	OBh	10.6	9 40.3	42 37	1 53.1	8 53	
67	---	OB⁺	11.9	10 40.3	47 10	1 53.1	8 57	
68	35 4021	A0 Ib	9.8	11 11.1	53 16	1 53.0	8 59	
69	---	B8 II	11.3	11 44.7	7 41	1 54.2	9 1	
70	---	OB⁻r	11.3	12 12.5	10 10	1 54.2	9 2	
71	---	OBce	10.7	12 20.5	19 51	1 54.0	9 3	
72	---	OB⁻	11.9	14 33.3	32 38	1 53.9	9 11	
73	35 4096	OB	11.6	21 43.1	55 40	1 54.2	9 37	R
74	---	OB	11.3	21 56.6	46 47	1 54.4	9 38	
75	---	OB⁻	12.2	22 16.1	42 7	1 54.6	9 39	
76	35 4126	(OB)	10.7	25 48.1	54 40	1 54.7	9 51	ADS 13882 ABD
77	---	OB⁻	12.2	33 50.1	36 55	1 56.2	10 19	
78	---	OB	12.2	37 45.3	15 39	1 57.2	10 33	
79	35 4234	F7 I	8.1	41 26.6	24 24	1 57.5	10 45	X Cyg
80	---	F4 II	12.0	41 46.8	6 18	1 57.9	10 46	
81	35 4258	OB⁻ce	9.2	44 14.6	21 26	1 57.9	10 54	B2.5 Vn, ADS 14277 AB
82	34 4157	F3 II	10.2	46 5.1	1 6	1 58.6	11 0	
83	35 4277	OB⁻ce	9.0	46 49.4	54 31	1 57.5	11 3	
84	35 4285	F6 Ib	9.2	47 54.9	28 23	1 58.2	11 6	
85	34 4312	OB⁻(ce)	8.7	21 7 51.6	17 15	2 1.4	12 9	B0.5 Ib
1	36 3811	OB⁻	10.0	19 58 37.2	36 23 39	1 50.9	8 12	
2	---	OB	11.7	59 21.5	57 19	1 50.1	8 14	
3	---	OBh	11.5	59 23.3	11 37	1 51.3	8 15	
4	36 3827	OBce	10.7	20 0 24.4	57 15	1 50.2	8 18	
5	36 3845	B9 Ib	10.5	2 1.0	59 48	1 50.3	8 24	
6	35 3943	A0 II	9.5	3 16.0	0 44	1 52.0	8 29	
7	36 3864	OBr	10.0	3 54.0	22 34	1 51.5	8 32	
8	35 3961	OB⁻	9.9	4 33.8	11 8	1 51.8	8 34	R
9	35 3966	OB	8.1	5 5.7	15 21	1 51.8	8 36	
10	35 3967	OB	9.0	5 20.8	12 49	1 51.9	8 37	
11	---	OB⁻	11.7	5 23.5	22 39	1 51.6	8 37	R
12	36 3882	OB	10.0	5 33.5	24 36	1 51.6	8 38	
13	---	OBr	11.5	6 29.4	40 0	1 51.3	8 41	
14	36 3896	OB	7.6	6 44.5	31 39	1 51.6	8 42	
15	---	OB	11.5	7 1.7	1 38	1 52.3	8 43	
16	---	OB⁻	10.8	7 6.8	34 14	1 51.5	8 44	
17	---	OB	11.1	7 22.5	1 44	1 52.4	8 45	
18	---	OB⁻	12.1	7 32.1	21 45	1 51.9	8 45	
19	36 3905	OB⁻	9.9	7 33.6	20 56	1 51.9	8 45	
20	36 3906	OBr	8.6	7 34.1	20 27	1 51.9	8 45	
21	---	OB⁻	11.1	7 40.4	42 44	1 51.4	8 46	
22	36 3914	OB	9.2	8 8.6	33 9	1 51.7	8 47	
23	35 4001	WNh	9.4	8 21.6	1 40	1 52.5	8 48	WN6
24	---	OB⁻h	10.9	8 54.2	22 23	1 52.0	8 50	
25	---	B9 II	8.9	9 3.8	7 31	1 52.4	8 51	
26	36 3927	OB⁻	9.1	9 35.1	20 57	1 52.1	8 53	
27	35 4013	WCh	9.3	10 0.8	2 49	1 52.7	8 54	WC7
28	36 3932	OB⁻	9.9	10 35.1	31 24	1 52.0	8 56	
29	---	A0 II	11.7	11 5.8	12 17	1 52.5	8 58	
30	36 3935	A8 Ib	10.6	11 10.3	52 8	1 51.5	8 59	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
31	---	OB⁻	11.7	$20^h11^m15^s$	33°51'57"	1^m51^s6	8'59"	
32	---	OB⁻	10.8	11 23.6	19 52	1 52.4	8 59	
33	35° 4026	OB⁻h	7.2	11 40.2	10 35	1 52.6	9 0	
34	36 3946	OBce	8.8	11 58.0	28 44	1 52.2	9 2	
35	---	OB⁻	11.5	12 4.7	11 38	1 52.7	9 2	
36	36 3947	OB	8.9	12 6.6	23 29	1 52.4	9 2	
37	---	OB⁺	11.7	12 16.5	37 49	1 52.0	9 3	
38	36 3956	WCh	8.8	12 39.4	30 28	1 52.3	9 4	WC6
39	---	OBr	10.4	12 46.5	42 33	1 52.0	9 4	
40	---	OB(le)	10.6	12 47.9	29 32	1 52.3	9 5	
41	---	OBr	10.7	13 3.3	42 2	1 52.0	9 6	
42	36 3960	OB	11.2	13 3.8	17 34	1 52.6	9 6	
43	---	OB	11.2	13 16.0	37 36	1 52.2	9 6	
44	---	OB⁻	11.9	13 18.3	44 22	1 52.0	9 6	
45	36 3963	B8 IIr	11.1	13 19.9	42 37	1 52.0	9 7	
46	--	OB⁻h,r	11.7	13 23.3	45 41	1 52.0	9 7	
47	---	OBr	10.8	13 33.0	28 14	1 52.4	9 7	
48	36 3968	OB	10.4	13 42.4	40 43	1 52.1	9 8	
49	---	OB	11.4	13 45.9	38 23	1 52.2	9 8	
50	35 4039	B8 II	10.4	13 59.1	12 16	1 52.9	9 9	
51	---	B8 II	11.5	14 15.9	11 3	1 52.9	9 10	
52	---	OBr	10.7	14 50.9	20 55	1 52.8	9 12	
53	---	OBh	11.7	15 39.5	42 47	1 52.3	9 15	
54	---	OB	11.0	16 7.9	29 39	1 52.7	9 17	
55	35 4062	OB	8.8	16 53.9	11 2	1 53.2	9 19	V382 Cyg
56	36 4001	OBle	10.0	16 59.2	48 17	1 52.3	9 20	
57	36 4005	F4 II	7.8	17 14.4	35 42	1 52.7	9 21	ADS 13693 AB
58	---	OB	11.1	17 32.4	43 12	1 52.5	9 22	
59	35 4067	OBr	10.4	17 43.6	3 36	1 53.5	9 22	
60	---	OB⁻	12.1	17 56.0	16 38	1 53.2	9 23	
61	---	OB⁻	11.7	18 31.2	17 33	1 53.3	9 25	
62	36 4016	OB⁻le	10.5	18 36.4	43 32	1 52.7	9 26	
63	36 4022	OB	10.6	19 13.5	38 58	1 52.8	9 28	
64	---	OB⁻r	12.3	19 33.8	55 59	1 52.5	9 29	
65	36 4028	WNh	11.0	19 38.9	45 37	1 52.7	9 29	WN6
66	---	OB	11.3	19 45.5	58 35	1 52.4	9 30	
67	---	OB	11.6	19 46.3	47 8	1 52.7	9 30	
68	---	OB⁻h	12.1	20 3.6	30 8	1 53.2	9 31	
69	---	OB	11.2	20 20.5	47 4	1 52.8	9 32	
70	---	OB⁻	11.3	21 0.6	57 7	1 52.6	9 34	
71	---	A5 Iab	11.7	21 19.8	54 42	1 52.7	9 35	
72	36 4044	OB	10.4	21 24.8	56 56	1 52.7	9 36	
73	36 4049	OB	9.3	21 42.8	46 0	1 53.0	9 37	B3 II
74	36 4051	B9 II	6.8	21 55.1	51 49	1 52.9	9 38	
75	36 4050	OB	10.2	21 56.3	21 37	1 53.6	9 38	B1 Ib
76	---	OB⁻r	11.7	22 49.5	17 23	1 53.8	9 41	
77	---	OB⁻	11.5	23 38.4	45 24	1 53.2	9 44	
78	---	OBr	11.0	23 44.6	57 56	1 52.9	9 44	
79	---	OB	11.1	24 29.0	4 47	1 54.3	9 47	
80	35 4141	A0 Ib	6.1	27 25.9	17 13	1 54.4	9 57	A1 Ib, 42 Cyg
81	36 4095	OBce,h	8.1	27 54.0	48 44	1 53.7	9 59	B0 IV: pe
82	36 4105	F5 Iab	7.2	29 5.2	45 59	1 53.9	10 [illegible]	F5 Iab, ADS 13949 A
83	35 4229	OB	8.5	40 44.7	12 1	1 56.3	10 43	B0.5 Ib
84	---	OB	11.9	47 15.0	29 22	1 56.8	11 4	
85	36 4308	OB⁻ce	9.9	52 8.5	49 51	1 57.1	11 20	
86	35 4426	OB	6.2	21 9 3.0	5 49	2 0.6	12 12	B1 Vp, HR 8105, R
87	36 4470	A7 II	6.8	11 25.7	25 34	2 0.5	12 19	HR 8120

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
1	37° 3578	F3 Ib	9.1	$19^h41^m\ 5\overset{s}{.}6$	37°33'30"	$1^m47\overset{s}{.}2$	7' 4"	BDS 9559 B
2	---	OB(ce)	12.1	42 41.6	47 59	1 47.0	7 10	
3	37 3615	OB	9.4	46 26.8	14 27	1 48.3	7 25	
4	---	OB⁻r	12.9	57 24.3	24 42	1 49.1	8 7	
5	37 3723	OB⁻	8.0	59 10.5	33 35	1 49.1	8 14	ADS 13262 AB
6	---	OB⁻	10.9	59 35.8	17 15	1 49.6	8 15	
7	---	OB⁻	11.3	20 1 6.5	40 36	1 49.1	8 21	
8	37 3768	OB⁻	9.9	5 0.2	52 58	1 49.2	8 36	
9	37 3776	OB⁻	9.7	5 57.4	17 50	1 50.3	8 39	
10	37 3783	OBce	8.1	6 29.8	59 2	1 49.2	8 41	BDS 9945 B
11	37 3785	OB⁻	9.3	6 44.3	21 15	1 50.3	8 42	
12	36 3900	OB	8.4	6 55.0	5 24	1 50.7	8 43	
13	---	B9 II	11.5	7 1.0	6 49	1 50.7	8 43	
14	37 3793	OB⁻	9.7	7 26.8	21 18	1 50.3	8 45	
15	37 3795	OBr	10.6	7 39.2	41 54	1 49.8	8 46	
16	---	OB⁻(ce)	11.1	8 10.0	0 38	1 51.0	8 47	
17	---	OB⁻	10.6	9 6.5	58 59	1 49.6	8 51	
18	37 3816	OB	8.9	9 54.3	23 59	1 50.6	8 54	ADS 13501 A
19	37 3819	OB⁻	9.5	10 12.0	29 54	1 50.5	8 55	
20	37 3824	OB⁻	9.7	10 30.7	51 6	1 49.9	8 56	
21	37 3825	OB⁻	10.0	10 33.3	54 49	1 49.8	8 56	
22	36 3945	OB⁻	9.8	11 55.2	8 52	1 51.2	9 1	
23	---	OB	11.0	12 6.6	59 35	1 49.9	9 2	
24	37 3835	OB⁻	9.7	12 12.7	36 20	1 50.5	9 2	
25	37 3838	OBce	9.8	12 21.2	40 48	1 50.4	9 3	
26	36 3958	OB⁺	7.6	12 39.2	12 11	1 51.2	9 4	
27	37 3844	(B	8.8	13 6.5	59 6	1 50.0	9 6	
28	37 3845	f1 II	7.6	13 1?.9	32 31	1 50.7	9 6	
29	---	B8 II	11.1	13 ?3.5	50 57	1 50.4	9 9	
30	---	OB⁻	11.5	13 54.0	33 23	1 50.8	9 9	
31	---	OB	12.3	14 1.8	39 23	1 50.7	9 9	
32	---	OBr	11.1	14 10.4	38 5	1 50.7	9 10	
33	37 3856	OB⁻le	10.4	14 17.4	24 9	1 51.1	9 10	
34	---	OB	11.5	14 18.6	35 48	1 50.8	9 10	
35	---	OB	11.7	14 35.5	25 48	1 51.1	9 11	R
36	37 3861	OB	9.4	14 38.6	46 3	1 50.6	9 11	
37	37 3859	OBce!	10.0	14 38.9	29 18	1 51.0	9 11	ADS 13626 c
38	---	OB	10.0	14 39.4	43 9	1 50.7	9 11	
39	37 3860	OB	8.8	14 40.3	29 13	1 51.0	9 11	ADS 13626 A
40	37 3862	OBce	9.9	14 41.4	29 24	1 51.0	9 12	ADS 13626 C
41	---	OB	9.8	14 45.8	31 58	1 51.0	9 12	
42	37 3866	OB	8.1	15 7.9	31 39	1 51.0	9 13	
43	36 3987	WNh	9.0	15 8.6	16 4	1 51.4	9 13	WN7, ADS 13641 A
44	---	OB⁻	11.1	15 10.2	57 56	1 50.3	9 13	
45	---	OB⁻	11.1	15 22.1	57 48	1 50.4	9 14	
46	36 3991	OBce,le	9.7	15 38.0	9 9	1 51.6	9 15	
47	---	OB	11.3	15 39.7	56 35	1 50.4	9 15	
48	---	OB⁻	11.5	15 40.1	6 56	1 51.7	9 15	
49	---	OB	11.1	15 48.2	57 13	1 50.4	9 16	
50	37 3871	OB⁺le,h,r	4.9:	15 56.6	52 35	1 50.6	9 16	P Cyg
51	---	OB⁻(ce)	10.7	16 0.6	46 22	1 50.7	9 16	
52	---	OB	10.7	16 2.8	39 28	1 50.9	9 16	
53	37 3872	F5 Iab	10.3	16 7.5	25 58	1 51.3	9 17	
54	---	OB⁻	10.9	16 18.5	52 0	1 50.6	9 17	
55	---	OB⁻	11.3	16 38.3	25 58	1 51.3	9 19	
56	---	OB⁻h	11.7	16 51.0	49 45	1 50.8	9 19	
57	36 4000	OB:	10.3	16 55.5	5 58	1 51.9	9 20	
58	37 3877	OB⁻	10.4	17 0.7	38 16	1 51.1	9 20	
59	37 3878	OB	8.7	17 2.4	41 7	1 51.0	9 20	
60	36 4004	OBr	10.4	17 12.6	14 28	1 51.7	9 21	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
61	37° 3881	CBle	9.1	$20^h17^m16^s.3$	37°36'42"	$1^m51^s.1$	9'21"	
62	---	OB⁻	11.9	17 17.7	4 2	1 52.0	9 21	
63	---	OBr	11.1	17 26.7	18 45	1 51.6	9 22	
64	37 3886	A0 II	10.7	17 31.5	29 53	1 51.3	9 22	
65	---	OB⁻r	12.3	17 34.3	28 9	1 51.4	9 22	
66	---	OBh,r	11.0	17 40.4	7 48	1 51.9	9 22	
67	37 3894	OB(ce,le)	8.8	18 17.7	40 20	1 51.2	9 25	
68	---	OBh	11.9	18 35.0	0 26	1 52.2	9 26	
69	---	OB⁻le	11.7	18 43.6	48 8	1 51.0	9 26	
70	---	OBr	11.7	18 59.1	38 37	1 51.3	9 27	
71	37 3898	CBr	9.2	19 3.9	34 21	1 51.4	9 27	
72	36 4024	OB⁺rr	9.9	19 23.3	14 56	1 52.0	9 29	R
73	---	OBr	11.9	19 27.2	13 49	1 52.0	9 29	
74	37 3901	OB	10.6	19 31.5	42 1	1 51.3	9 29	
75	---	OBr	10.9	19 38.8	51 55	1 51.1	9 29	
76	---	OB⁻	11.5	19 46.7	15 39	1 52.0	9 30	
77	---	B9 II	11.1	20 16.4	33 27	1 51.6	9 32	
78	---	OB	11.7	20 19.6	46 47	1 51.3	9 32	
79	---	OBh	11.9	20 39.7	44 40	1 51.4	9 33	
80	37 3909	OBr	9.4	20 44.4	58 5	1 51.0	9 33	
81	---	OB	12.1	20 44.6	50 2	1 51.2	9 33	
82	---	OBr	10.2	20 53.9	48 1	1 51.3	9 34	
83	---	OBr	11.3	21 5.9	4 15	1 52.4	9 35	
84	---	OB⁻	11.1	21 9.0	42 11	1 51.5	9 35	
85	---	OB	12.2	21 20.7	7 34	1 52.4	9 36	
86	36 4048	OBr	10.9	21 40.6	8 44	1 52.4	9 37	B0 Ib
87	37 3917	OBr	11.0	21 51.2	44 14	1 51.5	9 37	
88	---	OBr	12.4	22 1.1	49 8	1 51.4	9 38	
89	---	OBh,r	12.1	22 16.5	21 50	1 52.2	9 39	
90	37 3927	OBr	11.4	23 14.6	18 3	1 52.4	9 42	O8f
91	---	OB	12.7	23 18.5	9 31	1 52.6	9 43	
92	36 4063	OB	10.8	23 47.2	12 36	1 52.6	9 44	09.5 Ib
93	---	OB⁻	11.2	24 7.3	58 56	1 51.5	9 45	
94	---	OB	11.9	24 14.4	9 12	1 52.9	9 49	
95	---	OBh	11.6	25 32.7	29 47	1 52.4	9 50	
96	37 3943	F6 Ia	10.6	26 5.7	50 36	1 51.9	9 52	
97	---	OB⁻rr	12.4	31 42.7	51 19	1 52.7	10 12	
98	---	OB⁻	11.7	31 53.7	22 16	1 53.4	10 13	
99	36 4145	OB(ce,le)	9.6	34 24.1	14 35	1 54.0	10 21	O9 V
100	37 4048	B9 II	10.6	44 35.2	54 49	1 54.5	10 56	
101	37 4092	OB⁻	10.0	51 45.0	59 52	1 55.4	11 19	B1 III
102	36 4330	B9 II	9.3	54 45.3	10 25	1 57.0	11 28	
103	37 4115	F4 II	9.2	55 1.2	22 10	1 56.8	11 29	
104	---	OB⁻h	10.3	21 11 15.4	15 50	1 59.5	12 19	
1	38 3786	F8 I	10.5	19 49 17.8	38 49 24	1 45.9	7 36	
2	38 3790	F5 Iab	9.9	49 53.4	37 10	1 46.3	7 38	F6 Ib
3	38 3793	OB	10.5	50 29.7	16 17	1 47.0	7 40	
4	---	OB⁻	12.3	51 2.4	18 3	1 47.0	7 43	
5	---	F4 II	10.9	51 50.3	12 20	1 47.2	7 46	
6	---	A2 Iab	11.7	20 6 4.7	4 42	1 49.0	8 40	
7	---	OB	11.4	6 46.8	36 23	1 48.2	8 42	
8	---	OB	11.3	6 54.9	2 37	1 49.2	8 43	
9	---	OB	11.4	6 58.6	43 57	1 48.1	8 43	
10	---	OBr	10.7	9 4.8	9 15	1 49.3	8 51	
11	37 3821	WNh	8.7	10 17.1	12 16	1 49.3	8 55	WN6
12	---	OB	11.9	10 18.0	43 48	1 48.5	8 55	
13	37 3827	F3 Ia	9.0	10 54.9	14 26	1 49.4	8 58	
14	37 3828	OB	9.2	10 58.1	4 35	1 49.6	8 58	
15	---	CB⁻	12.1	11 27.3	20 39	1 49.1	9 0	

No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
16	---	OB⁻	10.6	$20^h11^m33^s.2$	38°26' 10"	$1^m49^s.1$	9' 0"	AGK_2: +38° 1987
17	38° 3956	OBr	7.6	11 33.5	36 56	1 48.9	9 0	R
18	---	OB⁻	11.3	11 37.2	49 15	1 48.5	9 0	
19	---	OB⁺	11.9	11 39.1	5 26	1 49.7	9 0	
20	38 3958	OBr	9.1	11 39.6	19 39	1 49.3	9 0	
21	---	OB⁺r	11.9	11 52.5	59 32	1 48.3	9 1	
22	37 3837	OBle	9.6	12 16.6	5 31	1 49.8	9 3	
23	38 3968	OBce	9.7	12 59.1	18 3	1 49.5	9 5	AD6 13584 AB
24	---	B8 Ib	11.3	13 12.8	39 54	1 49.0	9 6	
25	---	OBle	11.3	14 18.8	23 50	1 49.5	9 10	
26	38 3980	OB	8.4	14 51.2	44 38	1 49.1	9 12	
27	---	OB	11.7	15 7.9	57 15	1 48.8	9 13	
28	---	OB⁻	12.1	15 11.5	59 2	1 48.7	9 13	
29	---	OB⁻	11.7	15 23.7	40 24	1 49.2	9 14	
30	37 3867	OBr	7.5	15 32.5	4 50	1 50.2	9 15	
31	---	OB⁻	12.1	16 8.0	11 45	1 50.1	9 17	
32	---	OB⁻	10.7	16 19.2	9 5	1 50.2	9 17	
33	38 3999	OB	10.4	16 26.8	29 47	1 49.7	9 18	
34	---	OB	12.1	16 33.8	51 26	1 49.1	9 18	
35	---	OB	11.0	16 36.6	3 54	1 50.4	9 19	
36	38 4000	OBce	9.3	16 40.3	43 14	1 49.3	9 19	
37	---	A0 Iab,h	10.3	16 51.4	10 31	1 50.2	9 19	
38	37 3879	OB	7.4	17 1.4	7 22	1 50.3	9 20	ADS 13686 AB
39	---	OBr	10.8	17 10.0	47 49	1 49.3	9 21	
40	37 3887	OB⁻	10.8	17 31.1	15 15	1 50.2	9 22	
41	38 4012	OB	8.9	17 42.0	53 57	1 49.2	9 23	
42	38 4010	WNh	8.7	17 42.6	34 24	1 49.7	9 23	WN5, V444 Cyg
43	---	OB⁻r	11.3	17 46.9	25 52	1 49.9	9 23	
44	37 3890	OBce	9.4	17 48.3	10 40	1 50.3	9 23	ADS 13711 AB
45	---	OB	11.5	17 54.7	49 28	1 49.3	9 23	
46	38 4016	OB	10.2	17 57.3	26 15	1 50.0	9 23	
47	37 3892	OB⁻	7.4	17 58.8	11 4	1 50.4	9 23	
48	---	OB⁻	11.2	18 11.2	57 59	1 49.1	9 24	
49	---	OBr	11.5	18 16.4	30 48	1 49.9	9 25	
50	38 4017	OB	10.3	18 17.4	49 22	1 49.4	9 25	
51	38 4018	OBr	10.3	18 19.6	30 3	1 49.9	9 25	
52	---	OB	10.4	18 31.4	32 31	1 49.9	9 25	
53	---	OB	11.3	18 55.4	33 44	1 49.9	9 27	
54	38 4031	OB⁻r	10.3	19 11.9	51 19	1 49.5	9 28	
55	38 4032	OB⁻	7.9	19 18.0	52 19	1 49.4	9 28	
56	---	OB	11.9	19 21.7	25 45	1 50.2	9 28	
57	---	OB⁻	12.1	19 24.7	32 40	1 50.0	9 29	
58	---	OB⁻	11.9	19 35.5	29 38	1 50.1	9 29	
59	---	OB⁻	11.7	19 40.0	31 33	1 50.0	9 30	
60	---	OB⁻	10.8	19 43.7	57 33	1 49.4	9 30	
61	38 4036	B8 Ib	8.9	20 0.6	28 8	1 50.2	9 31	
62	---	OB⁻	10.9	20 17.0	14 15	1 50.6	9 32	
63	---	OB	11.9	20 18.9	19 28	1 50.4	9 32	
64	---	OB⁻	10.4	20 22.1	52 17	1 49.6	9 32	
65	38 4043	OBce	9.3	20 30.8	33 50	1 50.1	9 33	
66	38 4044	OB	10.5	20 34.4	44 41	1 49.8	9 33	
67	---	OBr	11.2	20 50.8	0 57	1 51.0	9 34	
68	37 3913	OB(le)	9.9	21 12.2	17 39	1 50.6	9 35	B0.5 III:n
69	---	OB	11.9	21 19.9	50 27	1 49.8	9 36	
70	38 4054	OBr	11.1	21 21.4	59 59	1 49.5	9 36	
71	38 4055	OBr	11.1	21 32.5	52 14	1 49.8	9 36	
72	---	OB⁻	11.5	21 35.6	26 36	1 50.4	9 36	
73	38 4057	OBce,le,r	9.2	21 36.3	46 38	1 49.9	9 37	B0 Ib
74	38 4059	OBce,le,r	9.8	21 45.3	43 13	1 50.0	9 37	07.5 V
75	38 4062	OB⁺ce,h,r	10.2	21 55.2	20 19	1 50.6	9 38	Bpe

No.	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
76	---	OBr	11.8	$20^h21^m57^s.6$	38°56'29"	$1^m49^s.7$	9'38"	
77	38° 4065	OB	10.2	22 4.2	1° 14	1 50.7	9 36	B0 II
78	38 4067	OB	10.6	22 8.8	22 3	1 50.6	9 38	
79	38 4070	OB+ce,le,r	10.4	22 9.4	56 27	1 49.7	9 39	05f
80	38 4069	OBcer	9.7	22 10.6	21 4	1 50.6	9 39	09.5 III
81	38 4071	OBr	9.8	22 14.0	22 32	1 50.6	9 39	B0 I
82	38 4072	OBr	9.8	22 15.8	19 48	1 50.7	9 39	B0 II
83	---	OB-	11.4	22 21.4	56 5	1 49.8	9 39	R
84	---	OB-	12.0	22 22.1	55 35	1 49.8	9 39	
85	38 4078	OB-	11.2	23 2.0	48 13	1 50.1	9 42	
86	---	OBh	12.4	25 4.1	2 56	1 51.5	9 49	
87	38 4098	B9 Ib	9.8	25 42.2	36 22	1 50.7	9 51	B9 Ib
88	---	OB-	12.2	25 52.7	44 35	1 50.5	9 52	
89	37 3945	OBr	10.3	26 26.1	11 20	1 51.5	9 54	B0 IInn
90	---	WC	12.5	26 31.5	27 15	1 51.1	9 54	HD 195177
91	---	OBr	11.6	31 12.3	12 11	1 52.1	10 10	
92	37 3976	OB-r	11.0	31 57.3	6 40	1 52.3	10 13	B1.5 Vn
93	---	OB-	11.9	41 56.2	49 37	1 52.7	10 47	
94	---	OB-	12.3	54 33.0	5 13	1 55.7	11 28	
95	---	(B8 II)	12.3	54 40.4	13 38	1 55.6	11 28	
96	---	OB-h	10.9	21 1 12.1	47 40	1 55.8	11 49	
97	38 4372	OB-	7.6	8 41.2	45 24	1 57.2	12 11	B1 V
1	39 3813	A8 II	10.5	19 31 29.3	39 16 0	1 43.3	6 25	
2	---	OB-	11.5	41 27.6	54 26	1 43.2	7 5	
3	---	A2 Iab	11.9	52 48.0	40 23	1 44.8	7 49	
4	---	OB-	11.7	59 33.7	45 24	1 45.5	8 15	
5	---	OB-	11.5	20 1 32.2	14 14	1 46.6	8 23	
6	39 4022	F1 II	10.2	2 17.7	48 53	1 45.7	8 26	
7	39 4031	OB-	9.5	3 56.7	51 12	1 45.9	8 32	
8	39 4033	OB	8.0	4 14.8	55 14	1 45.8	8 33	
9	39 4049	OB-	8.2	6 21.1	36 15	1 46.6	8 41	
10	39 4059	OB-	9.2	7 39.5	25 57	1 47.0	8 46	
11	39 4076	OB+ce,h,r	10.5	10 7.7	51 28	1 46.6	8 55	
12	---	OB	11.9	10 44.2	51 29	1 46.7	8 57	
13	39 4087	A7 Iab	11.1	11 12.5	58 41	1 46.6	8 59	
14	---	OB	11.7	11 21.7	10 16	1 47.9	8 59	
15	39 4098	OBce ! h	10.7	13 10.2	48 43	1 47.1	9 6	
16	39 4100	OB	10.2	13 19.2	21 15	1 47.9	9 7	
17	39 4115	B9 II	6.6	15 37.0	26 14	1 48.1	9 15	
18	39 4117	OBr	10.7	16 1.6	52 31	1 47.4	9 16	
19	---	OB	11.9	16 9.3	48 46	1 47.5	9 17	
20	---	OB-	11.5	16 14.4	10 54	1 48.5	9 17	
21	---	OBr	10.9	16 32.3	44 22	1 47.7	9 18	
22	38 4002	OB-	9.8	16 56.5	14 56	1 48.5	9 20	
23	39 4131	OB	10.8	17 2.7	18 33	1 48.4	9 20	
24	38 4006	OB	8.1	17 19.6	6 56	1 48.8	9 21	
25	---	OB	11.5	17 27.0	38 50	1 48.	9 22	
26	---	OB	10.8	17 43.2	12 54	1 48.7	9 23	
27	39 4136	OBr	10.7	17 48.7	45 7	1 47.8	9 23	
28	39 4137	OB-le	9.9	18 6.8	23 53	1 48.4	9 24	ADS 13718 AB
29	---	OBce,h	11.2	18 7.5	37 34	1 48.	9 24	
30	---	OB-	11.3	18 23.8	15 53	1 48.7	9 25	
31	---	OBce	10.8	18 42.7	52 10	1 47.8	9 26	
32	39 4141	OB-	10.9	18 45.0	41 33	1 48.1	9 26	
33	38 4028	OBr	9.9	18 56.2	12 24	1 48.6	9 27	
34	39 4151	OBr	10.1	19 44.4	40 9	1 48.2	9 30	
35	---	OB	11.7	20 2.5	28 19	1 48.6	9 31	

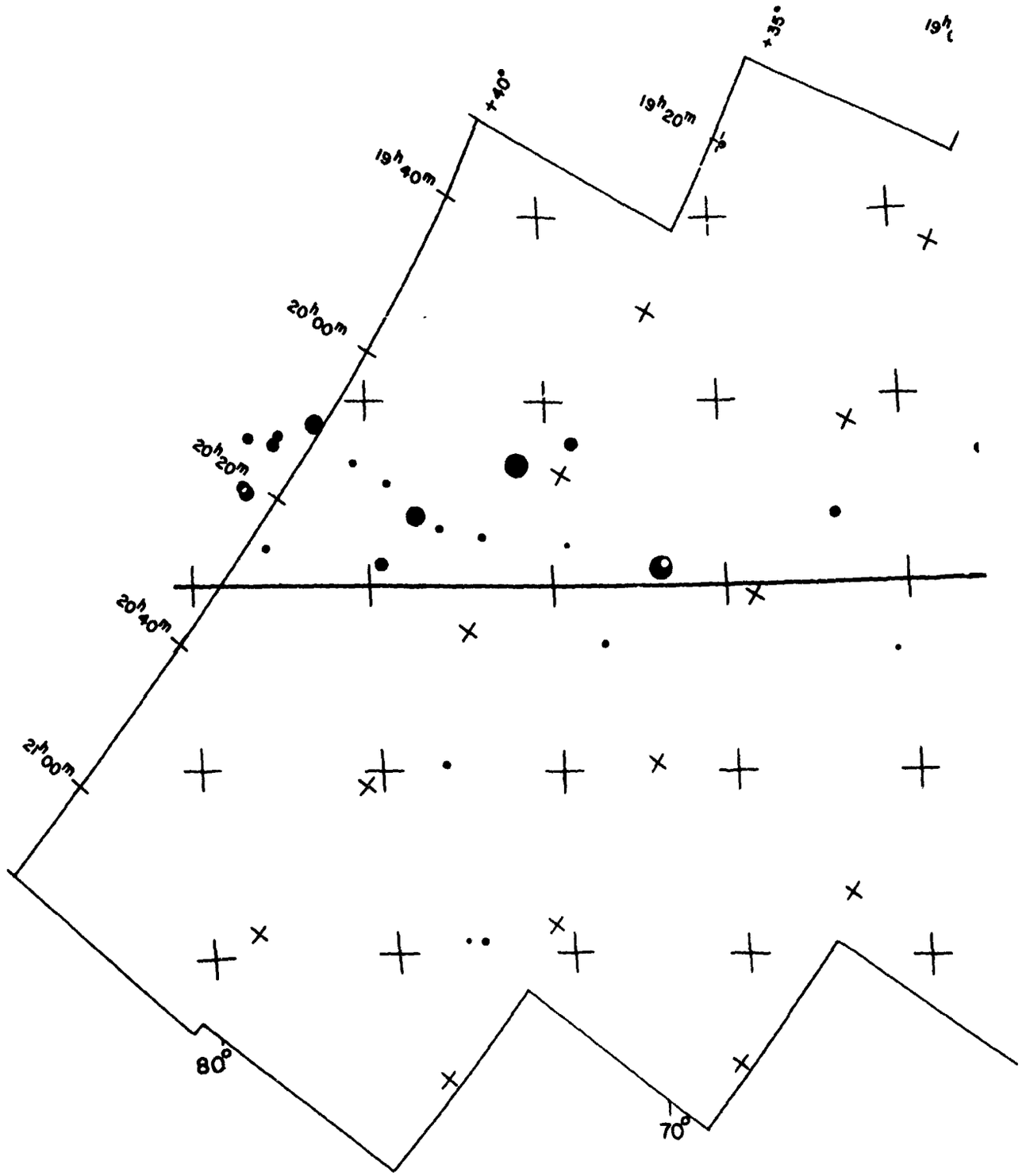
No	BD	Spectral Type	m pg	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
36	38° 4038	OB	10.3	$20^h20^m\ 7^s1$	39°17'55"	1^m48^s9	9'34"	
37	---	OB:	11.9	20 41.3	8 53	1 49.2	9 33	
38	---	OB	11.7	20 50.5	26 3	1 48.8	9 34	
39	38 4050	OBr	9.5	21 4.5	2 48	1 49.4	9 35	B1.5 Ib, ADS 13783 B
40	38 4053	OB:e	9.6	21 12.2	10 58	1 49.2	9 35	B2 III
41	---	OBle,h	11.6	21 14.7	20 9	1 49.0	9 35	
42	---	OB	12.2	21 17.9	56 6	1 48.0	9 35	
43	38 4054	OB:	11.0	21 21.2	0 4	1 49.5	9 36	B1: III:
44	39 4162	OBr	10.4	21 34.9	59 40	1 48.0	9 37	08 V:
45	---	OBr	11.8	21 39.3	11 13	1 49.3	9 37	B0 V
46	---	OB:	11.7	21 49.4	28 27	1 48.8	9 37	
47	---	OB	11.8	21 57.3	27 25	1 48.9	9 38	R
48	---	OBle,r	11.0	22 22.9	30 57	1 48.8	9 39	07
49	39 4168	OBr	11.1	22 32.8	36 17	1 48.7	9 40	07
50	39 4169	OB:	10.2	22 36.8	39 41	1 48.6	9 40	
51	---	B0.5: III:	12.2	23 8.6	17 39	1 49.3	9 42	B0.5 III:
52	39 4189	OB+le,r	10.5	24 31.8	30 16	1 49.2	9 47	
53	---	OB+	11.1	25 28.3	34 37	1 49.2	9 50	
54	39 4313	A9 Ia	10.6	44 41.4	44 44	1 51.8	10 56	
55	38 4235	A5 Iab	8.2:	46 6.4	6 8	1 53.0	11 1	V367 Cyg, R
56	---	B8 II	11.2	48 59.9	4 31	1 53.5	11 10	
57	---	OB:	12.3	59 21.4	3 16	1 55.2	11 43	
58	---	B7 II	11.2	21 0 34.1	18 48	1 55.0	11 47	
59	---	OB:	11.8	1 0.4	33 28	1 54.8	11 48	
60	39 4423	G0 I	10.4	2 21.8	46 21	1 59.7	11 53	VY Cyg
1	40 3948	OB:	7.5	19 54 0.8	40 15 29	1 44.0	7 54	BDS 9748 A, R
2	39 4020	F5 Ib	8.9	20 1 39.3	8 17	1 45.1	8 23	
3	---	OB	11.1	10 8.8	5 6	1 46.3	8 55	
4	---	OB:	11.9	10 32.6	19 3	1 45.9	8 56	
5	39 4082	OB+r	7.6	10 47.0	7 0	1 46.3	8 57	
6	40 4061	OB	9.9	11 16.7	52 28	1 45.1	8 59	
7	39 4096	OBr	7.9	12 39.8	10 34	1 46.4	9 4	
8	40 4082	OB+r	10.4	14 8.7	43 15	1 45.7	9 10	
9	40 4086	OB:	7.6	14 28.1	48 31	1 45.6	9 11	
10	---	OB	11.5	14 40.5	8 18	1 46.8	9 12	
11	40 4087	OBr	9.7	14 50.3	43 42	1 45.8	9 12	
12	---	OB	11.1	15 3.4	37 40	1 46.0	9 13	
13	---	OB	11.1	15 11.3	7 59	1 46.9	9 13	
14	40 4090	OB+r	9.2	15 13.9	41 17	1 45.9	9 14	
15	40 4103	OB	5.9	16 21.1	34 27	1 46.3	9 18	ADS 13672 AB, HR 7767
16	39 4130	A0 Iab,r	9.1	16 52.5	4 10	1 47.2	9 20	
17	40 4113	OBrr	10.3	17 11.8	32 45	1 46.4	9 21	
18	40 4115	OB:	8.6	17 35..	43 48	1 46.2	9 22	
19	39 4135	OBr	10.4	17 41..	18 11	1 46.9	9 23	
20	40 4117	OB	10.5	17 46.6	29 36	1 46.6	9 23	
21	40 4119	OB:le	9.1	17 53.9	43 50	1 46.2	9 23	
22	40 4137	OB	8.6	20 18.9	49 30	1 46.4	9 32	
23	39 4159	(F5 Iab)	2.8:	20 25.9	5 44	1 47.6	9 32	F8 Ib, gamma Cyg
24	40 4139	OB:	8.0	20 57.7	33 12	1 47.0	9 3[illegible]	
25	---	OB	11.0	21 12.4	35 48	1 46.9	9 35	
26	40 4147	OB+r	9.4	21 23.9	42 48	1 46.8	9 36	
27	40 4146	OB	10.3	21 24.1	35 59	1 47.0	9 36	ADS 13792 A
28	40 4150	OB+r	8.0	21 31.1	35 50	1 47.0	9 36	
29	---	OB	10.4	22 29.0	16 0	1 47.7	9 40	
30	39 4177	OBce,r	10.0	23 33.9	3 9	1 48.2	9 44	06.5

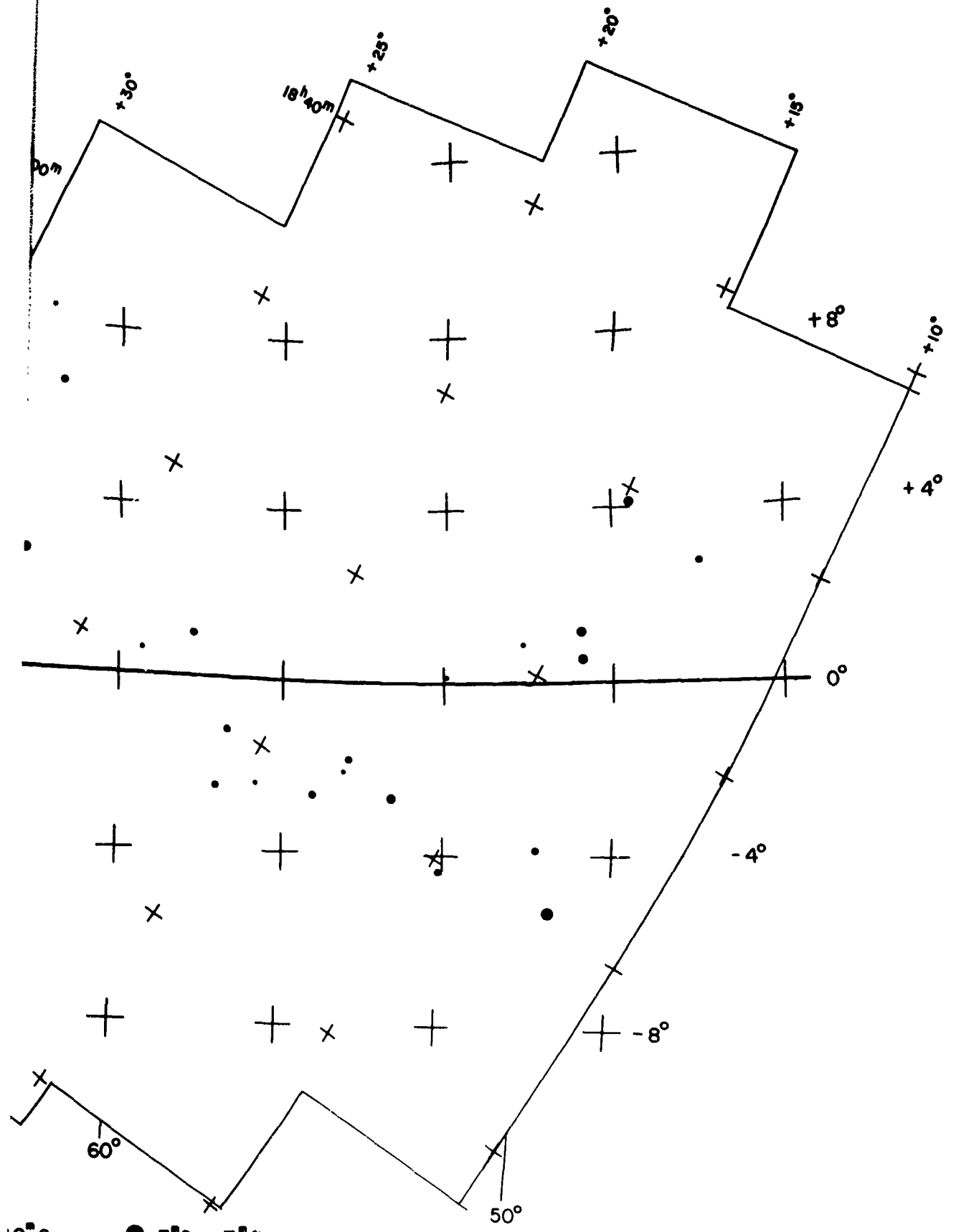
No	BD	Spectral Type	m_{pg}	Right Ascension 1950	Declination 1950	Precession R.A.	Precession Decl.	Remarks
31	39° 4179	OBIe,r	11.0	$20^h23^m39^s.3$	40°13'59"	$1^m47^s.9$	9'44"	
32	---	OB+ce	11.7	23 40.3	3 4	1 48.2	9 44	
33	---	OB⁻	10.4	25 47.3	22 5	1 48.0	9 51	
34	40 4179	OB	10.0	25 56.0	25 24	1 47.9	9 52	
35	---	OB	12.2	26 35.1	17 26	1 48.2	9 54	
36	---	OB⁻r	11.2	30 47.5	3 36	1 49.2	10 9	
37	---	OB⁻	11.5	48 51.0	12 53	1 51.8	11 10	
38	39 4368	OB⁻ce	7.3	53 30.2	6 29	1 52.7	11 25	B2 IV p
39	39 4455	OB⁻ce	10.0	21 7 25.7	11 16	1 55.0	12 o	
1	40 4015	A0 Iab	7.8	20 3 54.9	41 8 9	1 43.6	3 32	
2	40 4032	OB	10.5	6 40.0	6 15	1 44.1	8 42	
3	---	OB⁻	10.6	12 34.9	4 18	1 44.9	9 4	
4	40 4072	OB	10.6	12 35.6	6 1'	1 44.9	9 4	
5	---	OB+r	10.1	16 19.2	12 35	1 45.2	9 18	
6	40 4132	OB	9.1	19 39.7	2 3	1 46.0	9 30	

Notes to the Catalogue

Zone	Star	Remarks
11°	2	ADS 12000 AB.
11°	5	Only one absorption spectrum is clearly identifiable in this overlap, and is assumed to belong to Aitken's component A.
13°	2	May be cA.
13°	10	May be B6 Iab.
16°	4	Nucleus of planetary nebula no. 220 in Vorontsov-Velyaminov's catalogue (Gaseous Nebulae and New Stars, p. 563 ff. Moscow - Leningrad: Soviet Academy of Sciences, 1948).
16°	9	Perhaps B7 II le.
17°	3	ADS 11884 A.
21°	7	May be cA.
22°	2	May be B8 Ib.
22°	3	ADS 12287 AB.
22°	6	BDS 8487 A.
24°	26	B7 IV (e), Osawa, Ap. J. 130, 159, 1959.
28°	2	May be cA.
29°	2	May be cA.
29°	5	P Cyg type. Strong Hα emission.
29°	6	Similar to AG Peg.
29°	22	May be cA.
30°	17	May be B7 II.
30°	37	HR 8084.
31°	1	Hβ in emission.
31°	15	The type given here is purely descriptive; among the grounds for doubting it is the fact that the spectrum shows no reddening despite its low galactic latitude. On the one plate covering its position, an absorption feature which may be Hγ is strong, while all other features, including the Balmer discontinuity, are at the limit of visibility.

Zone	Star	Remarks
32°	15	ADS 13335 A.
34°	12	May be B8 Ib.
35°	33	ADS 13374 A.
35°	61	May be B9 II.
35°	73	May be cA.
36°	8	May be B7 II.
36°	11	May be cA.
36°	86	ADS 14724 A.
37°	35	May be B8 II.
37°	72	May be B7 Ir.
38°	17	May be B6 Ia.
38°	83	May be B7 Ib.
39°	47	May be cA.
39°	55	ADS 14314 AB. The published Δm (Aitken, A New General Catalogue of Double Stars Within 120° of the North Pole) is so large that the observed spectrum must actually be entirely that of the primary. The primary is said to be composite in the Henry Draper Catalogue, and for this reason the star is given two HD numbers, HD 198287/8. The spectrum does not appear composite on our plates, and was characterized by Hynek (Perkins Contribution 1, No. 10, 1938) as one simulating compositeness because of high luminosity. This conclusion is almost certainly correct.
40°	1	May be B7 II.


+40°
+35°
19h40m
19h20m
20h00m
20h20m
20h40m
21h00m
80°
70°
• 13m.0 –
• 12m.0 – 12m.9
• 11m.0 – 11m.9
• 10m.0 – 1
• 9m.0 –
• 8m.0 –
OB+ STA

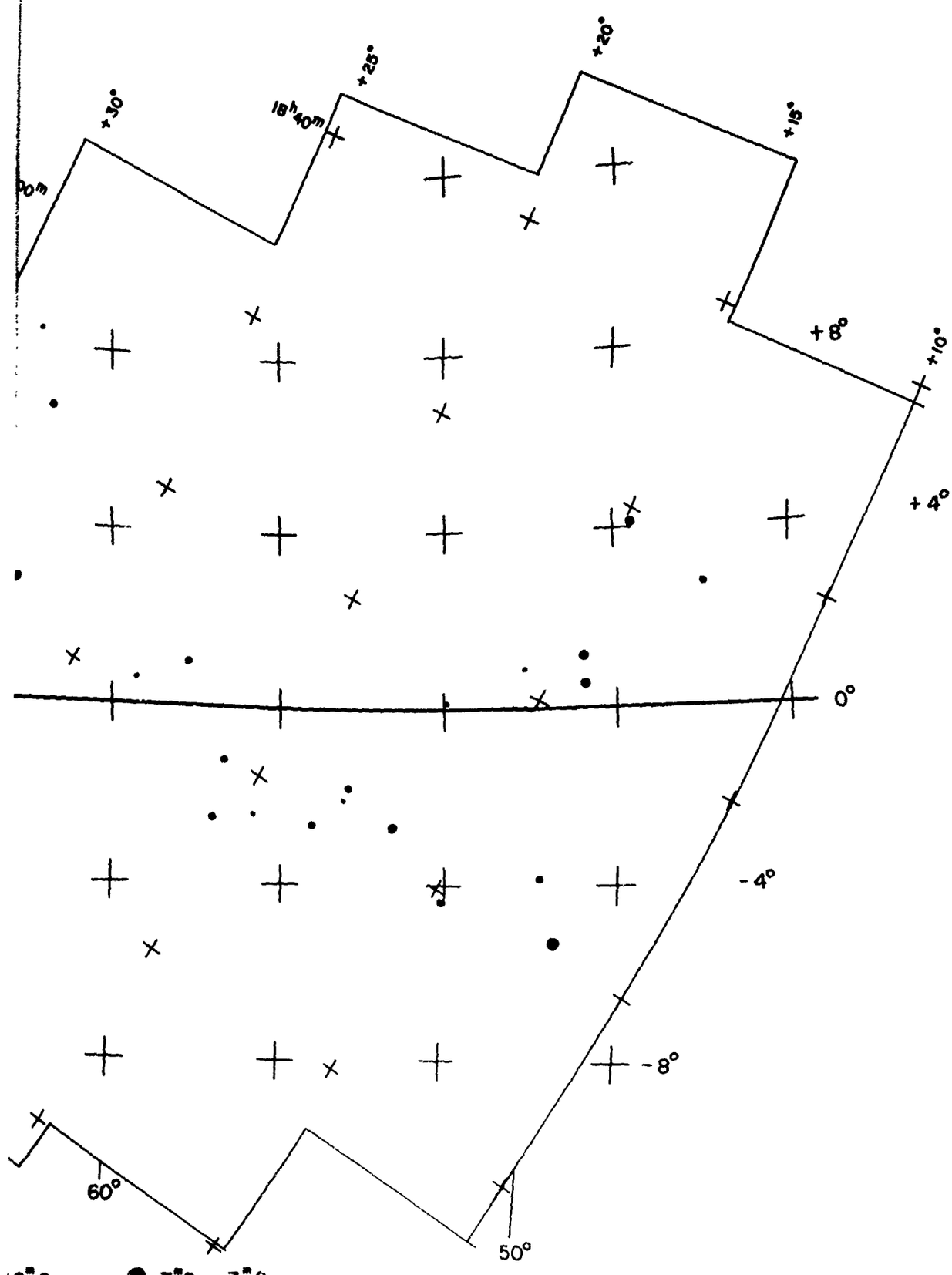


10"9 ● 7"0 – 7"9

9"9 ● 6"0 – 6"9

8"9 ● – 5"9

RS

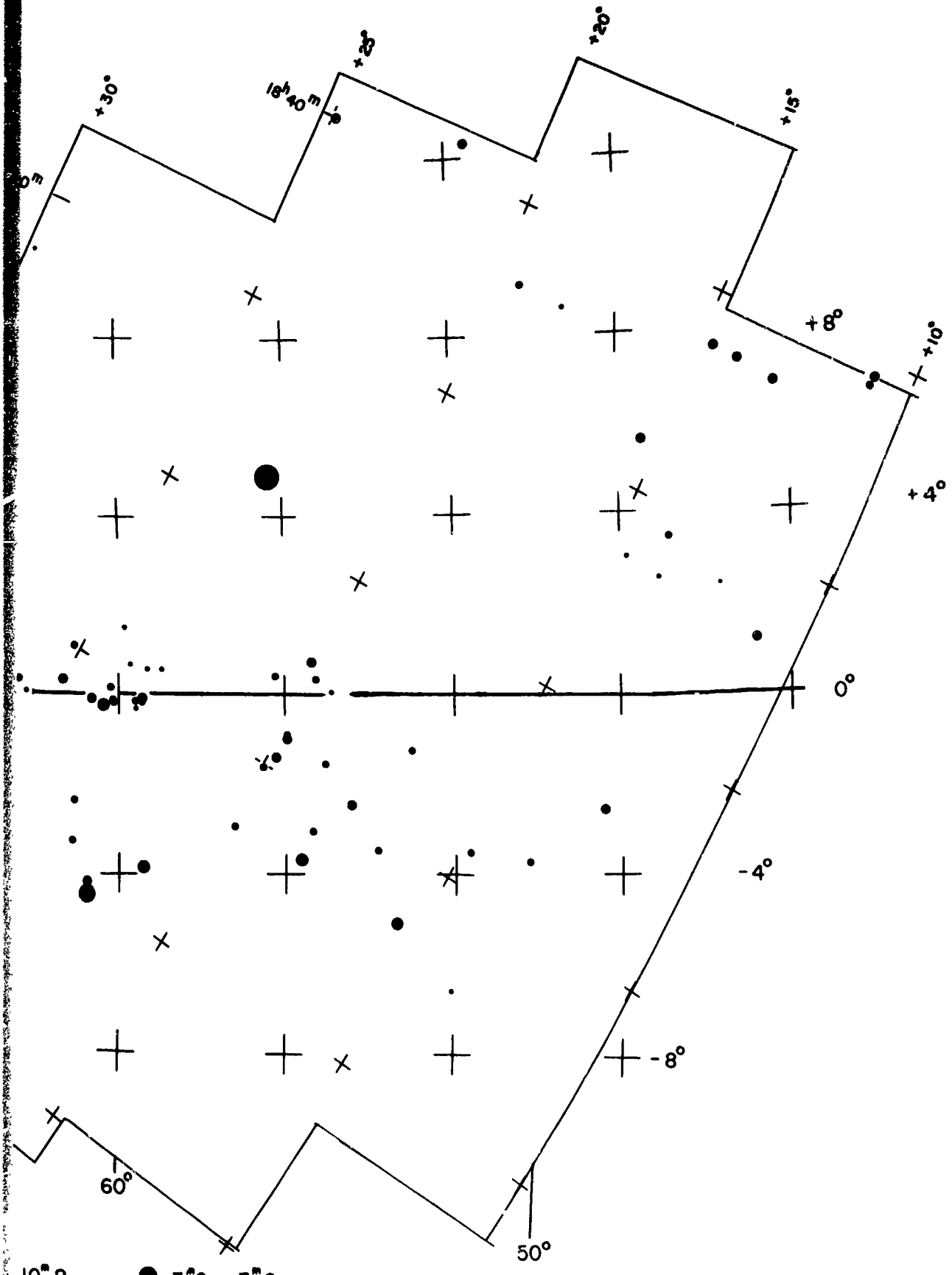


10"9 ● 7"0 – 7"9

9"9 ● 6"0 – 6"9

8"9 ● – 5"9

RS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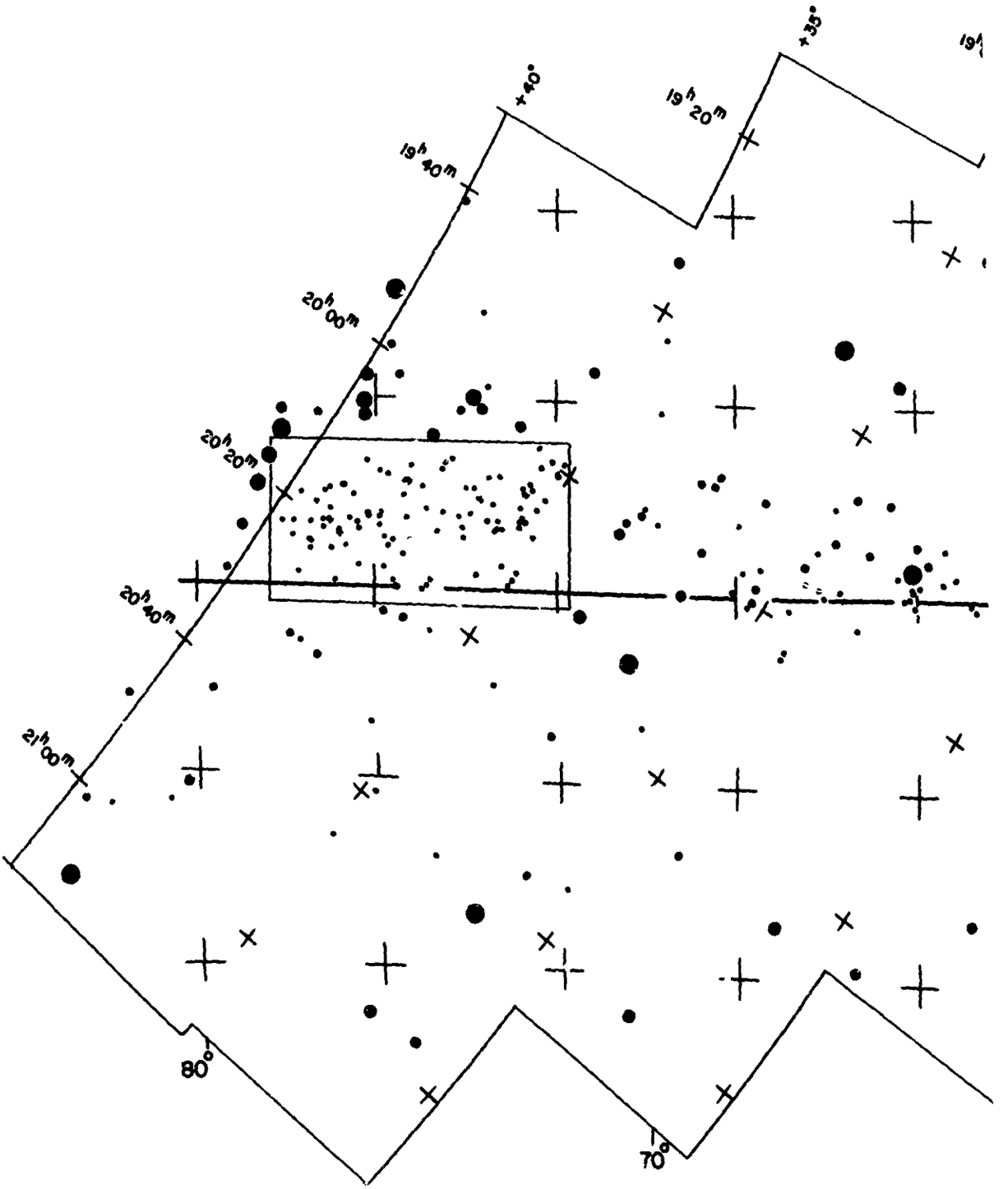
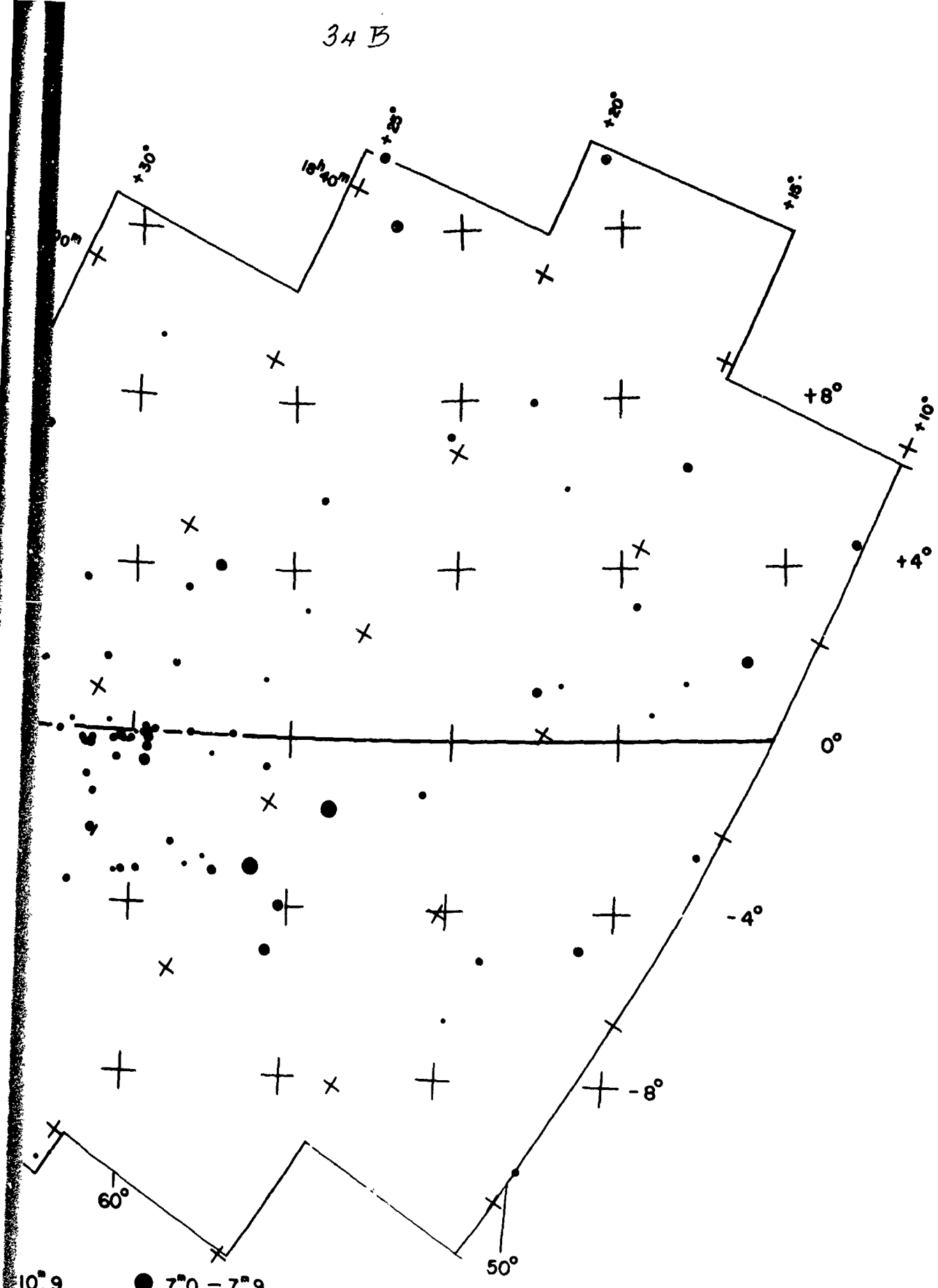
18h40m
+25°
+20°
+15°
+8°
+10°
+4°
0°
-4°
-8°
60°
50°
10m9
9m9
8m9
7m0 - 7m9
6m0 - 6m9
- 5m9

ARS


+40°
+35°
19h40m
19h20m
20h00m
20h20m
20h40m
21h00m
80°
70°
• 13".0 -
• 12".0 - 12".9
• 11".0 - 11".9
• 10".0 -
• 9".0 -
• 8".0 -

OB⁻ STA

34 B

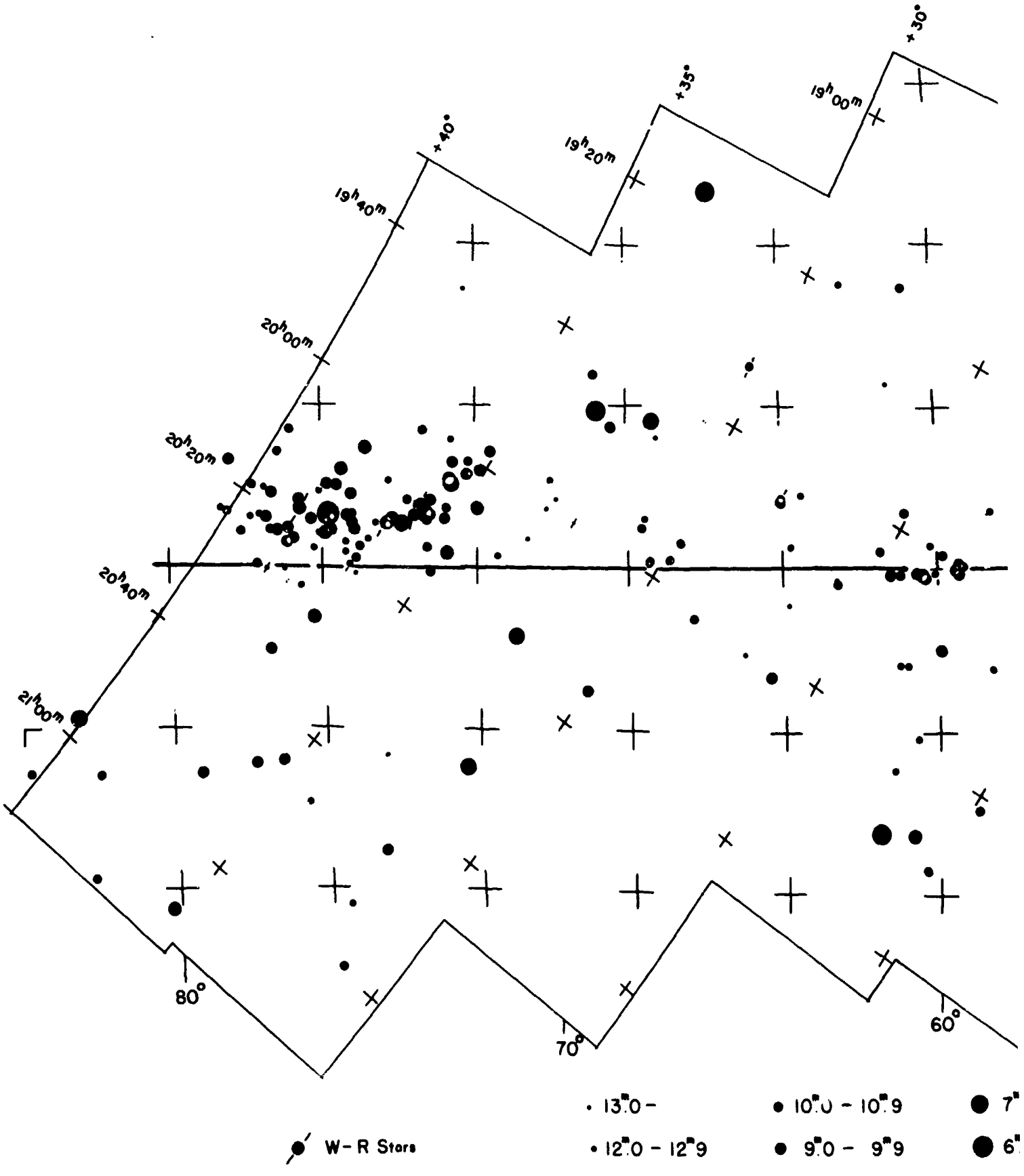


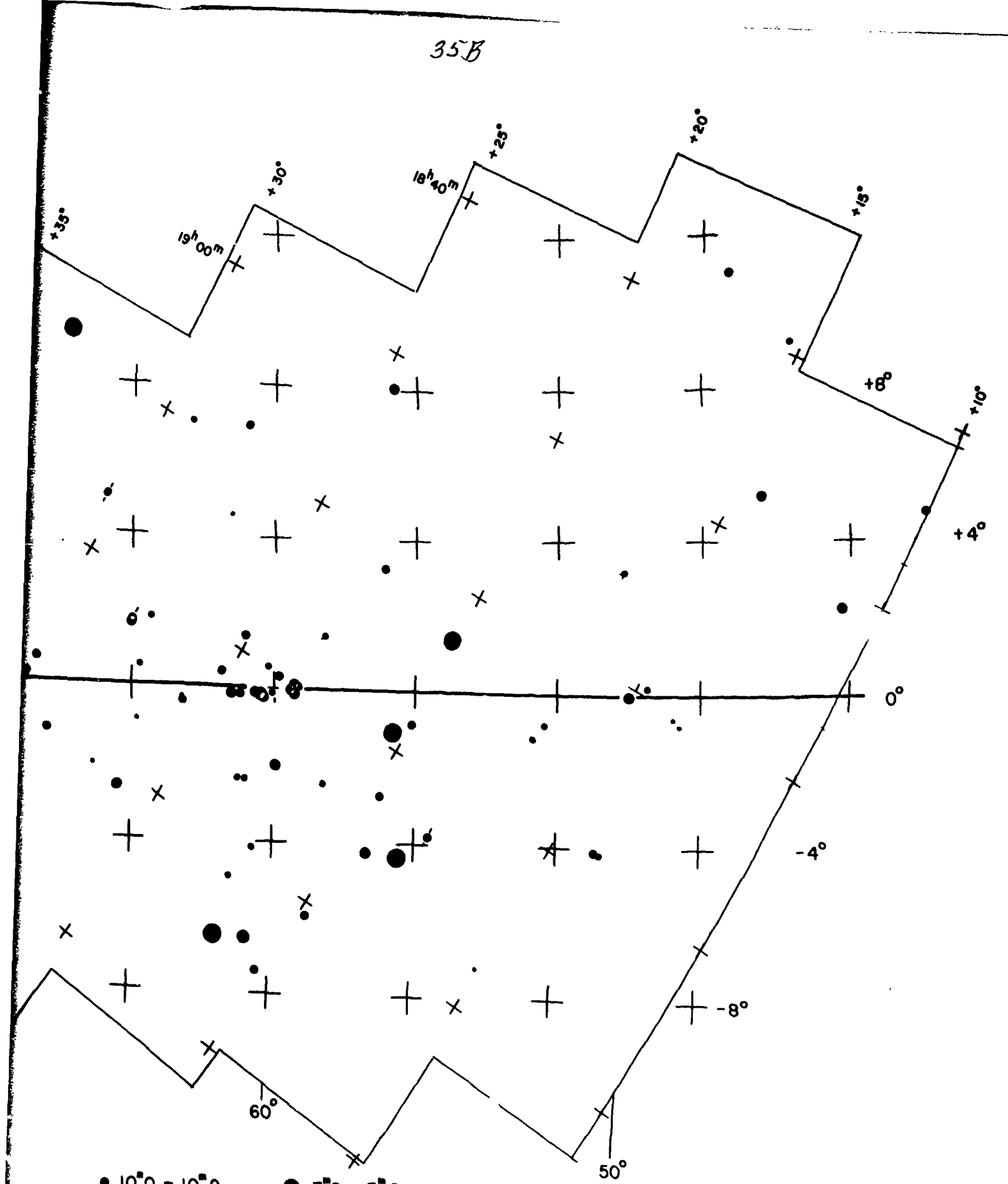
10".9 ● 7".0 – 7".9

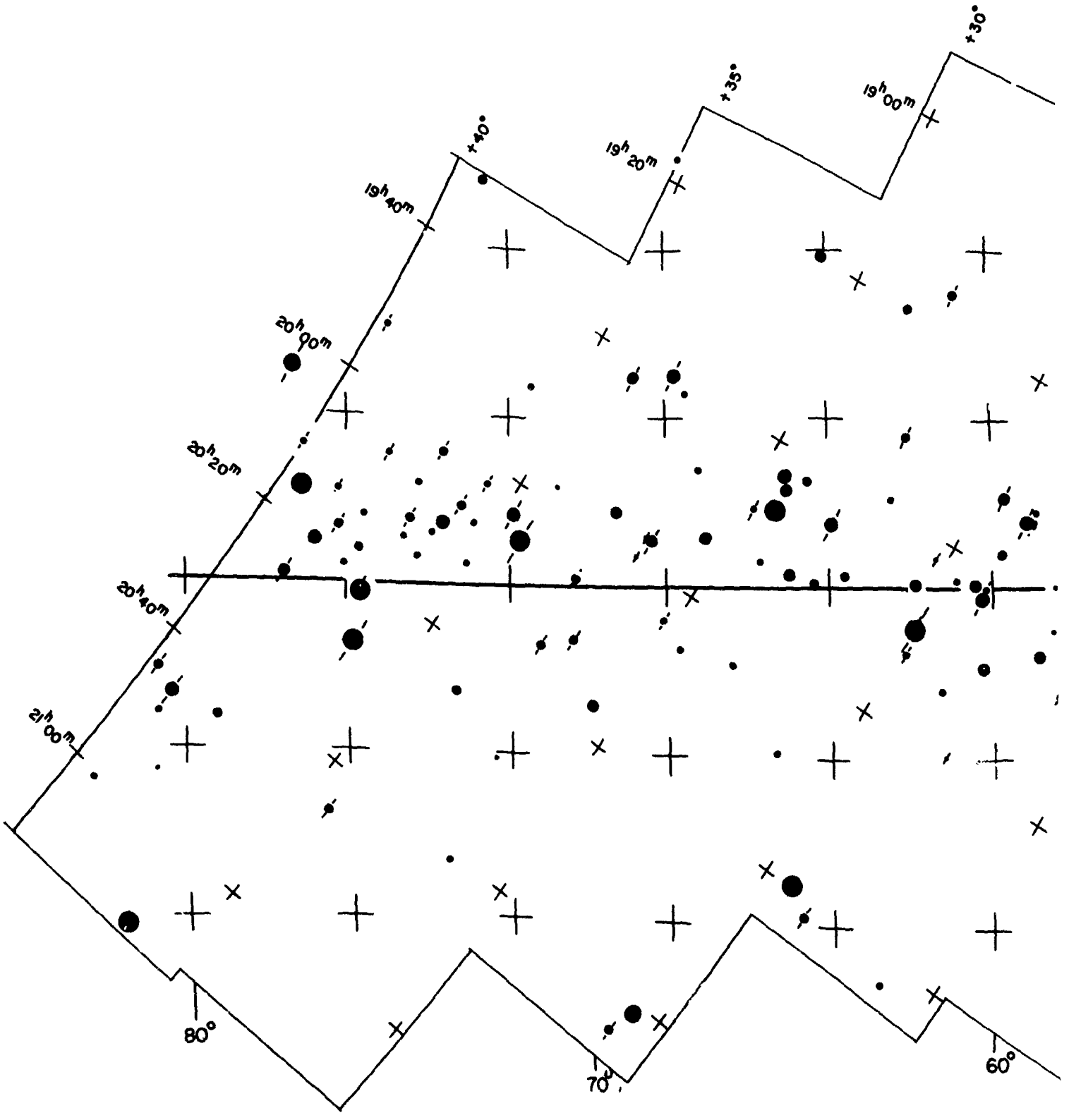
9".9 ● 6".0 – 6".9

8".9 ● – 5".9

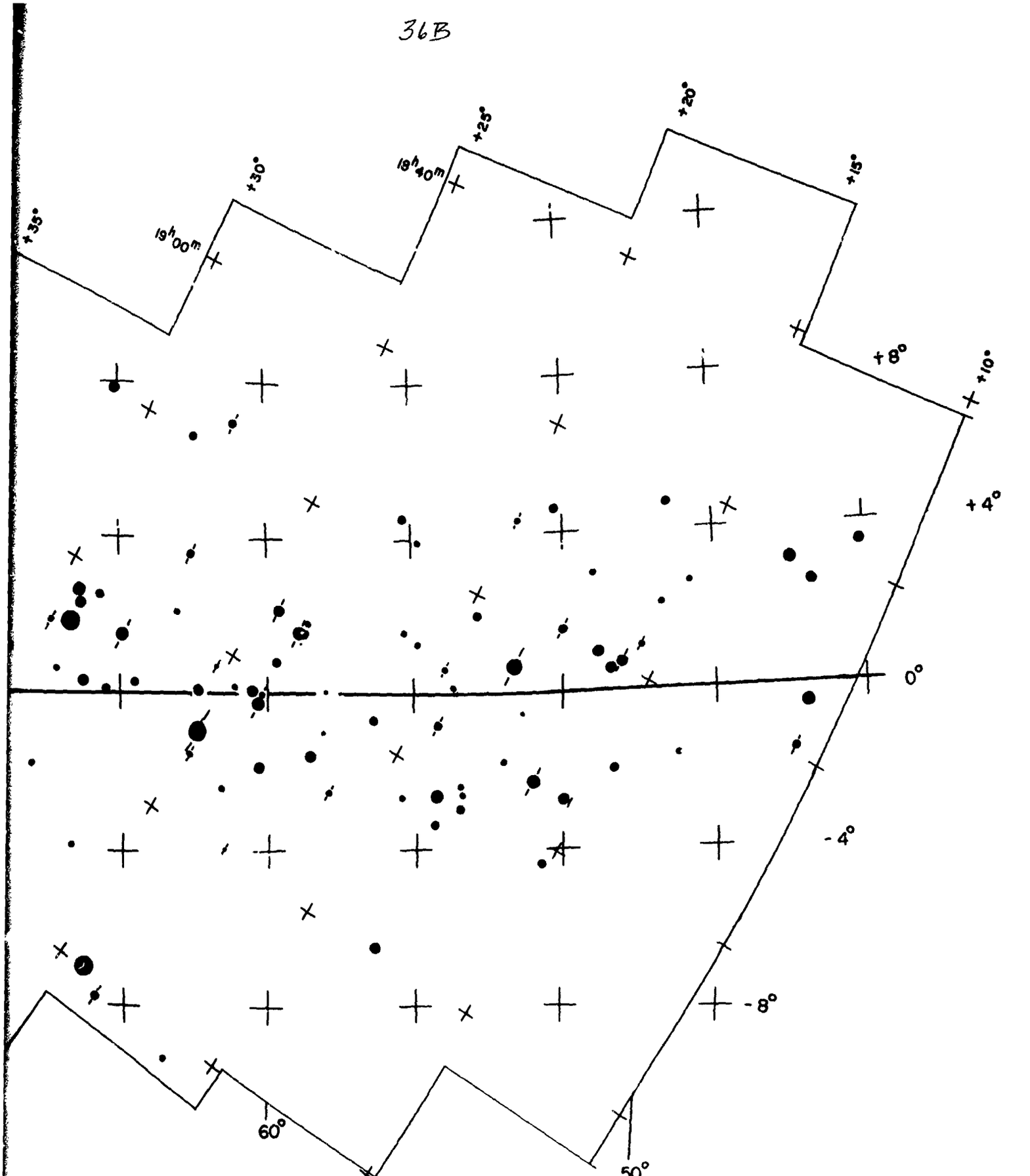
RS

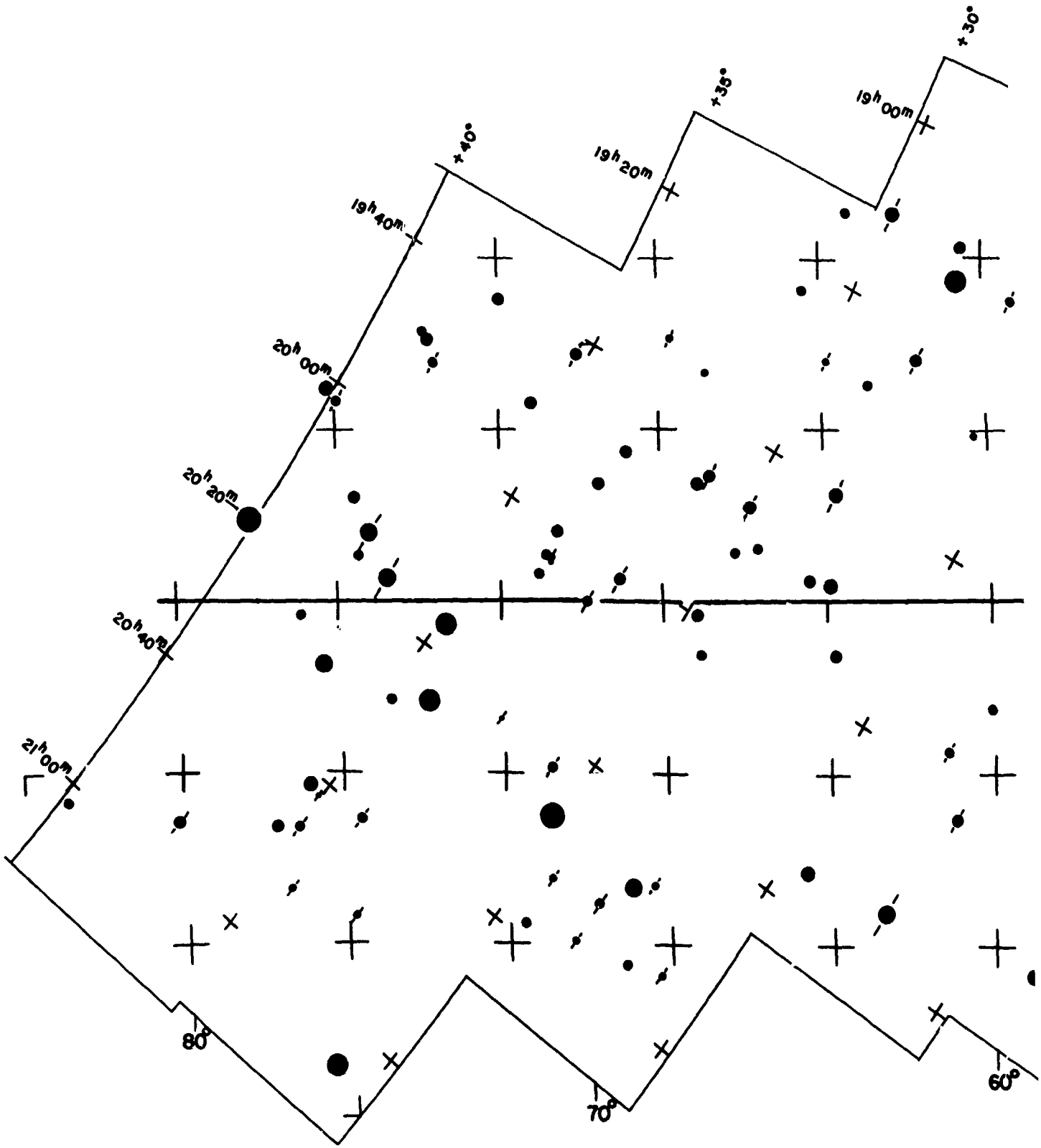

+40°
+35°
+30°
19h40m
19h20m
19h00m
20h00m
20h20m
20h40m
21h00m
80°
70°
60°
W-R Stars
• 13".0 –
• 12".0 – 12".9
• 11".0 – 11".9
• 10".0 – 10".9
• 9".0 – 9".9
• 8".0 – 8".9
• 7"
• 6"
EMISSION OBJECTS


+35°
+30°
+25°
+20°
+15°
+10°
+8°
+4°
0°
-4°
-8°
19h00m
18h40m
60°
50°
• 10".0 - 10".9
• 9".0 - 9".9
• 8".0 - 8".9
• 7".0 - 7".9
• 6".0 - 6".9
- 5".9
EMISSION OBJECTS



A & B SUPERGIANTS

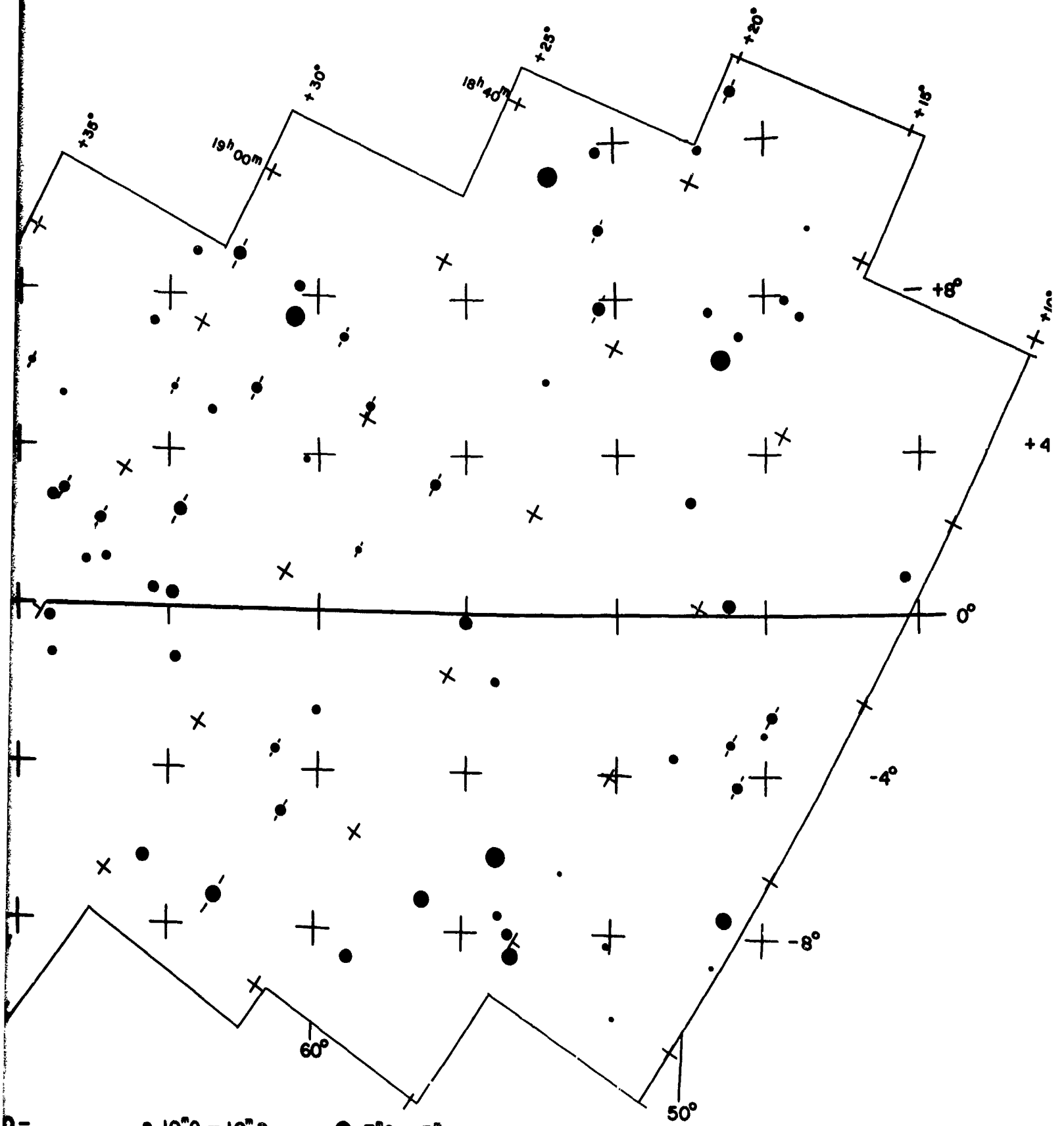

+35°
19h00m
+30°
+25°
19h40m
+20°
+15°
+10°
+8°
+4°
0°
-4°
-8°
60°
50°
10".0 - 10".9
9".0 - 9".9
8".0 - 8".9
7".0 - 7".9
6".0 - 6".9
- 5".9
12".9
8".9
A & B SUPERGIANTS



II & Ib-II

• 13".0 –
• 12".0 – 12".9
• 11".0 – 11".9
• 10".0 – 10".9
• 9".0 – 9".9
• 8".0 – 8".9

F & G SUPERGIANTS



D –
D – 12".9
D – 11".9

• 10".0 – 10".9
• 9".0 – 9".9
• 8".0 – 8".9

● 7".0 – 7".9
● 6".0 – 6".9
● – 5".9

F & G SUPERGIANTS